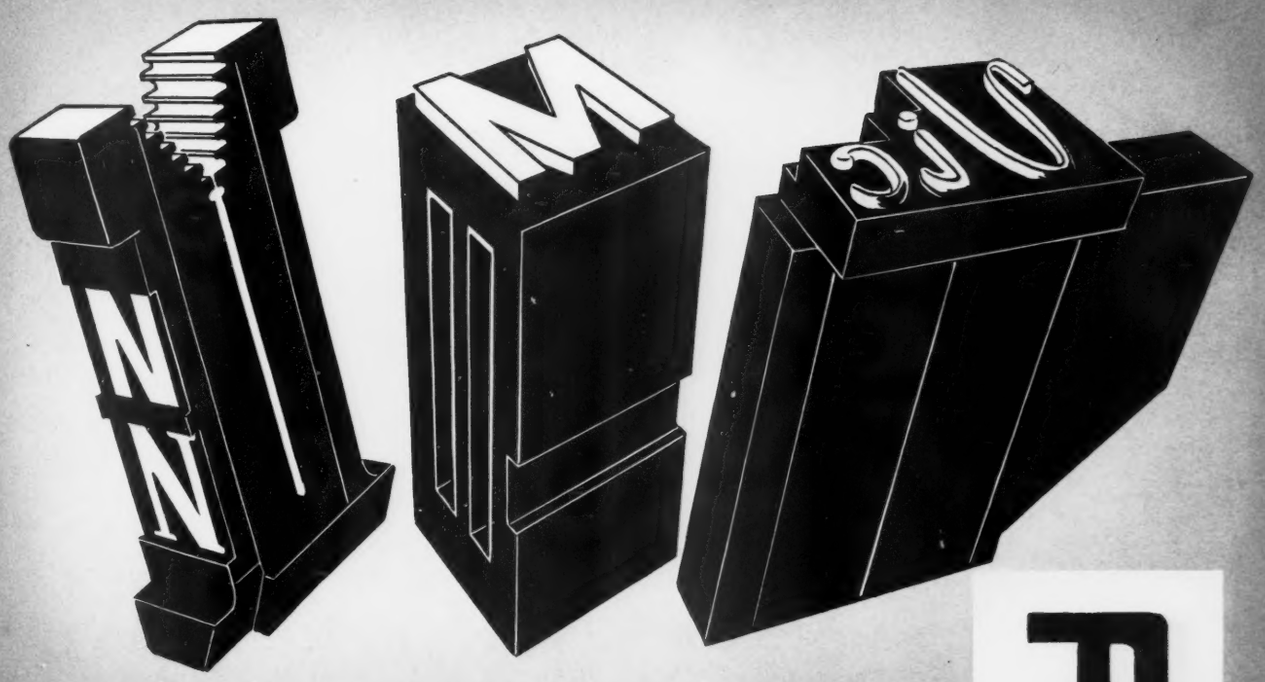
PRINTING EQUIPMENT ENGINEER



JULY 1938

A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

Operators and Executives Agree

That Master Model Linotype Features Fill the Bill

OPERATOR: "You know why I don't get those headaches any more?"

EXECUTIVE: "Sure! It's because you have this Optic-Aid Front. No more whirling parts in front of your eyes. They claim it reduces errors, too."

OPERATOR: "My proofs have been cleaner lately. I always did think those moving parts made it hard to concentrate."

EXECUTIVE: "Oh, they've figured efficiency right down to a fine point on these new Blue Streaks."

OPERATOR: "Yeah, but they didn't forget us operators. Did you see how easy it is to change magazines?"

EXECUTIVE: "Sure! With that Vertical-Lift you don't have to worry about straining yourself. And it's the quickest change I've ever seen."

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BROOKLYN, N. Y.

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Type Metal CATECHISM

In which are answered questions pertinent to remelting type metal.

By A. Hoyt Levy*

Editor's Note—The editor has asked an executive associated with each of several type metal manufacturing companies a number of questions related to the proper handling and care of type metal in the printing plant. It is intended to present practical technical information with which many plant executives are familiar but at the same time some new or improved methods related to handling and maintaining metal will be incorporated in the replies. This month we are printing the first of the series.

YOUR question asked: *What is meant by normal dross?* By normal dross is meant just what the name implies and that is, the dross which is generated by a type metal of standard formula.

The question is probably prompted by the increasing use of nickel-surfaced stereotype plates. The dross resulting from the remelting of these plates is *sub*normal. This commercial value is lower than that of the dross uncontaminated with nickel.

To go some steps further into the question, a dross which is loaded with a lot of foreign material such as dirt swept up from the floor, cigar butts, reglets, etc., dumped into the dross, certainly should not be considered as normal dross.

While we are on the subject, we might mention an abuse that exists in some plants in connection with the collection of dross. I refer to the dumping of dross and skimmings at high heat into the drums in which they solidify so that in order to release the dross, it becomes necessary to destroy the drum. This is not unlike the story of the maid who shoved her hand down into an expensive vase to clean out the dirt and then in order to release her hand had to smash the vase.

Your questions asks: *What calibre of employe should be charged with the responsibility of remelting?*

With due respect to the editor, I feel as though he has sent me back into the kindergarten class when he asks me what calibre of employe should be charged with the responsibility of remelting. In fact, I am tempted to reply that only morons should be employed for that work. That answer would satisfy my honor because it would put the editor on the spot. But I wonder if my answer would be as far away from the fact, at that. If I were to judge by the majority—and majority, as a rule, does rule—I would answer just that. For the fact is that in the majority of plants throughout the country, the remelt work is put in charge of men whose only recommendation for the job of remelting is brawn. And because the job of remelting is classed generally as a "laborer's" job in which intelligence is the least consideration, the remelt man is usually hired primarily to do odd jobs around the plant, such odd jobs including the remelting of metals.

Go about the country and see where and how remelting is done in the majority of printing plants. The pots are long past junk age. They are crowded into the darkest corner of the plant. Even when the man who does the remelting is intelligent and eager to do a proper job, he is handicapped by lack of light, lack of air, lack of space and, worst of all, lack of interest from those who should be most interested. It is no credit to the employer that he equips his composing room and pressroom with modern equipment, light and air and shoves the remelt room out of sight—and out of mind.

The remelt department (if I can be so bold as to raise it to the level of a "department") is, in a sense, the most important department in a printing plant. However important the composing department may be, the remelt department can "make it or break it" by ruining the metal or improving it. For the remelting of metal involves more than dumping the slugs into the remelt-pot and pouring the molten metal into the molds. It involves care lest zinc cuts, spaces, mats, foundry type or other foreign matter get mixed in with the slugs. It involves remelting at the right temperature. It involves proper cleaning of the metal to purge it of the dirt that gets in with the slugs. And more important than the above, it must have the personal interest of the man who does the work. A disinterested, unintelligent remelt-man can cost his employer more than the salary he gets, by the loss of metal in skimming the dross.

The duties of the remelt-man are, I repeat, of as much importance to the success of the plant as those of the highly-paid employees. An intelligent and industrious man in charge of the remelt-room will not only save the plant money in salvage from the dross, but he will see that the metal is kept free from impurities by periodical purgings; he will watch the formula of the metal and will take samples for his employer or employing executive to be sent to the manufacturer at regular intervals for analyses and post the analyses on a chart; he will prevent the metal from deteriorating; he will skim the bars when he casts them in the mold (which morons never do)—and upon his work will depend the quality of the slugs cast by the machine, and the clean, legible sheets that the presses will deliver. And he will not ask for the credit of the fine jobs turned out though he be entitled to a large share.

As to your final question: *Is the man charged with the responsibility of remelting underpaid at present?*—I do not know. I have never asked any one of them what he gets. I can only surmise.

*United American Metals Corporation, Brooklyn, New York.

Represents Intertype in Missouri

Harry L. Horn has been appointed to represent Intertype Corporation in the State of Missouri. Mr. Horn previously covered Iowa in the same capacity, and before that he worked as machinist-operator throughout the west for twenty-eight years. He was born in Missouri, made his home there for many years, and is well known in printing circles in that State. He will continue to make Intertype's Chicago branch his headquarters.

Huber Executive Changes

Central District Manager Sam E. Mills of J. M. Huber, Ins., has announced the appointment of Ralph C. Persons as Chicago Branch Manager and Carl Denman as St. Louis Manager.

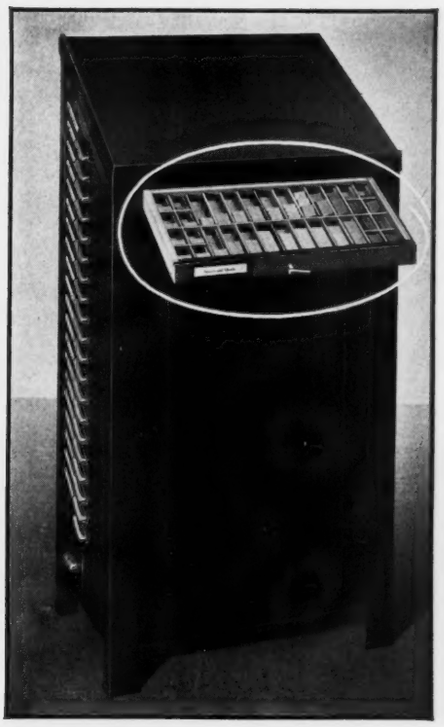
Mr. Persons has been manager of the Huber St. Louis branch for the past four years. For the past twelve years Mr. Denman has represented Intertype Corporation in Missouri territory.

In Behalf of Easy Reading

The participation of the Lanston Monotype Machine Company during the past ten-year period to provide usable and legible type designs is discussed in a booklet just published by the company. A number of full book page settings are included and opposite each page is a page explaining the distinguishing characteristics of the face.

Address your request to the Lanston Monotype Machine Company direct or in care of *Printing* Equipment *Engineer.*

Which?



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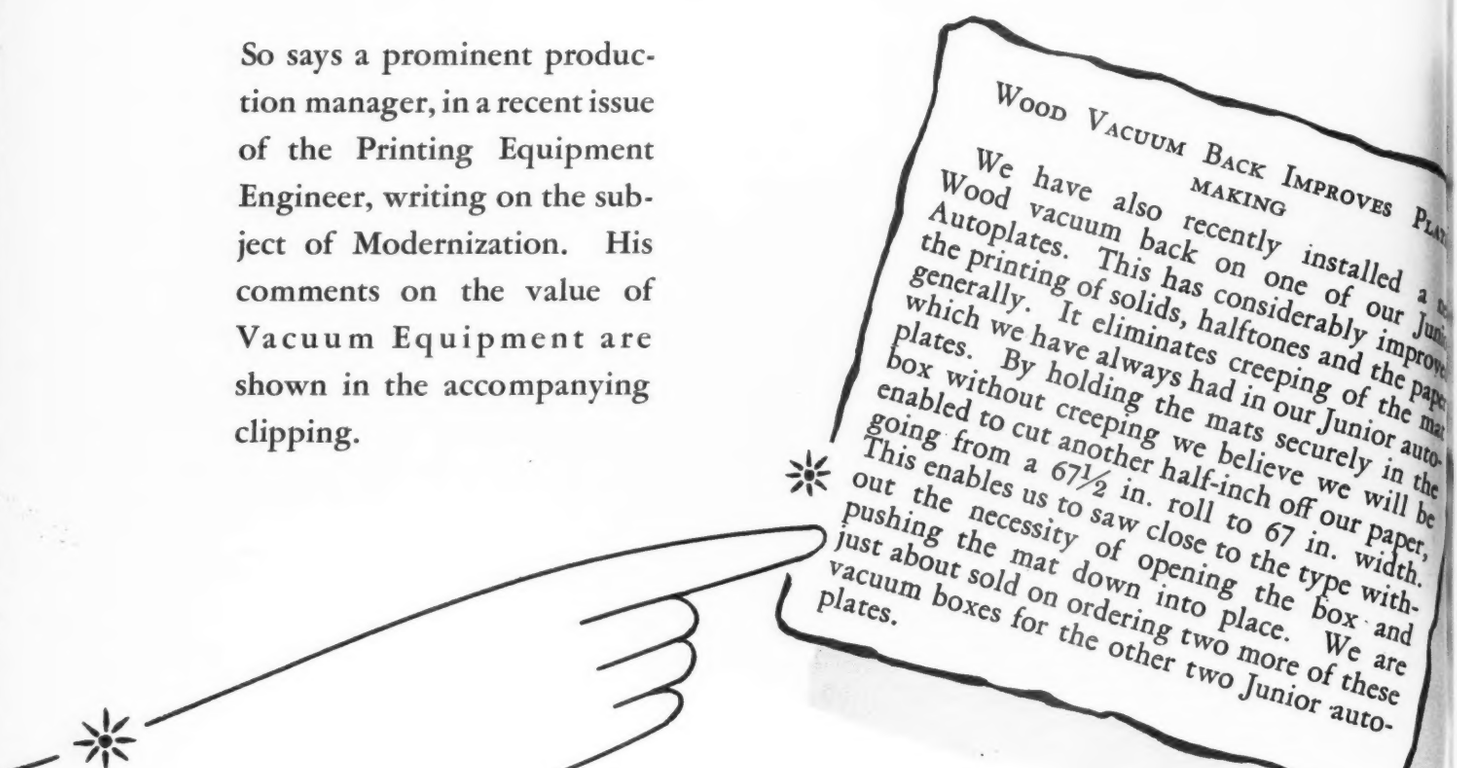
THE NEW WOOD VACUUM BACK

"has considerably improved the printing of solids, halftones, and the paper generally"

So says a prominent production manager, in a recent issue of the Printing Equipment Engineer, writing on the subject of Modernization. His comments on the value of Vacuum Equipment are shown in the accompanying clipping.


WOOD VACUUM BACK IMPROVES PLATE MAKING
We have also recently installed a Wood vacuum back on one of our Junior Autoplates. This has considerably improved the printing of solids, halftones and the paper generally. It eliminates creeping of the mats which we have always had in our Junior autoplates. By holding the mats securely in the box without creeping we believe we will be enabled to cut another half-inch off our paper, going from a 67½ in. roll to 67 in. width. This enables us to saw close to the type without the necessity of opening the box and pushing the mat down into place. We are just about sold on ordering two more of these vacuum boxes for the other two Junior autoplates.

We are happy to announce that this repeat order has been received.

Why don't *you* try Vacuum on *your* Autoplates? You, too, will be delighted with the improvement in your presswork. Write for a folder on the new Wood Vacuum Equipment, which is applicable to all types of Autoplate machines.

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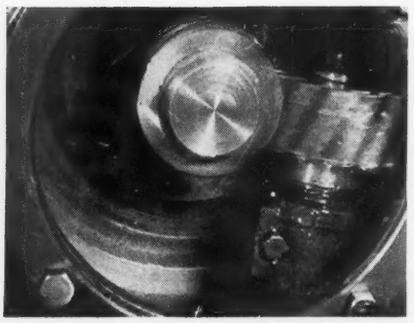
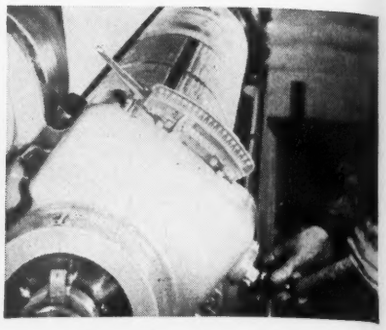


Lubrication is automatic



Impression adjustment is fool-proof

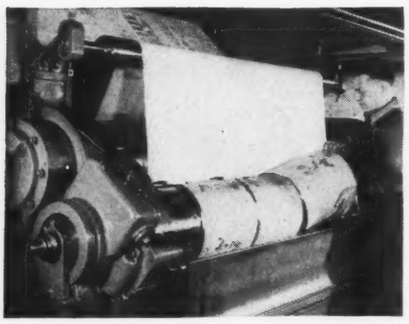
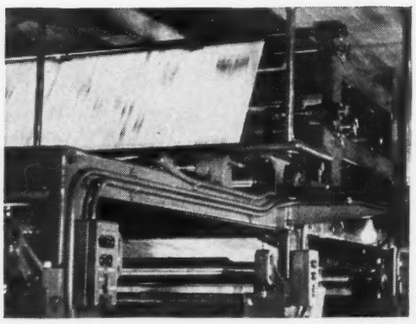
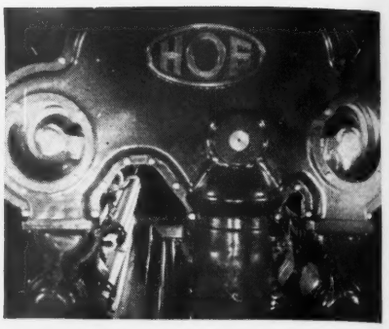


Plate lock-up is instantaneous

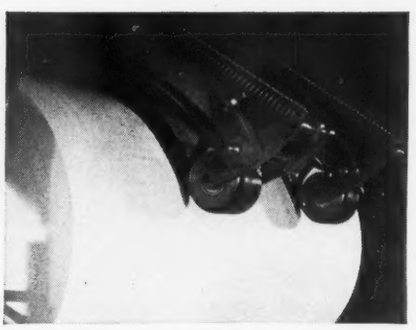


Top-section is sturdy for high speeds

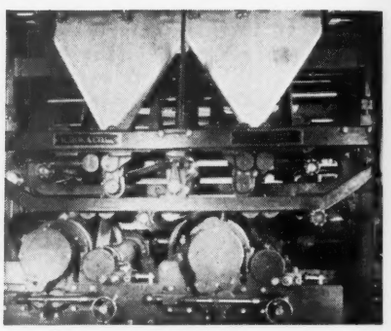


Rugged units for sustained speeds

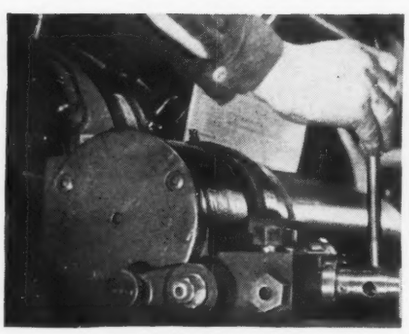
Roll changes are effortless



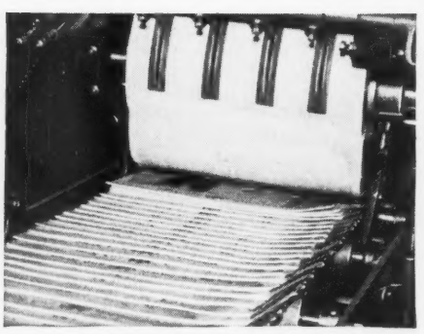
Tension is automatic and electric



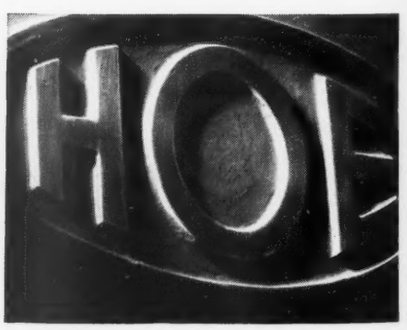
Folder is anti-friction bearing type



Adjustments are simple, convenient



The laydown is neat and orderly



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Printing Equipment Engineer

Trade-Mark Registered U. S. Pat. Office

July, 1938
Volume 56 No. 4

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STANDARD OF THE PRINTING WORLD

Rambling Reporter Attends Toronto A.N.P.A. Mechanical Conference

WELL, it was a great A.N.P.A. Conference at the Royal York in Toronto Your Rambling Reporter managed to pick up quite a few items of interest for those production and mechanical executives, who couldn't get there because the boss was having another attack of being "penny wise and pound foolish." After all, any mechanical executive who attended this Conference, and didn't bring back more than the value of the dollars spent in getting him there and back—well, if he didn't, there is something wrong with him. So let's get down to business.

Our editor, Mac Sinclair, returned home a few hours after his arrival, due to his wife's serious injury in an automobile accident. We are glad to report that she is improving. Speaking of automobile accidents, Frank Sherman of Lanston Monotype Co., was in one in Toronto and he says that from now on he is living on borrowed time. Frank has pretty well recovered. And while we are talking about casualties, we want to mention that our old friend, Tim Ryan, didn't have any trouble with automobiles, but he did run into some bad shrimp and spent most of his time at the Conference in bed, with ptomaine poison. Wednesday morning, however, we saw him in the dining room eating milk and crackers and with his usual personality grin.

Had a nice visit with Messrs. Persons and Rosenthal of the Huber Ink Co. We also had the pleasure of meeting Messrs. Montgomery and Bacon for the first time. We understand from A. B. Bradie that the Certified Dry Mat Corporation is expecting a "blessed event" soon. Watch for the announcement in *P-Double-E*. Here's a big bouquet of orchids for E. P. Hamilton of the Hamilton Mfg. Company, who, when he found out about Mac Sinclair's trouble, offered to be our candid camera man.

A new face at the Mechanical Conference among supply men was Ed Mills of the Eastern Newspaper Supply Company. Rightfully, he is proud of a fine new catalog. One of the pleasant surprises of the Conference was another newcomer, Mrs. Davis of the Allan B. Croke Company; a charming and personable lady. One of the busiest supply men at the Conference was Harry L. Gage of the Mergenthaler Linotype Company. We tried a number of times to locate him for a chat, but missed out. Gene Hammond of Black Rock Mfg. Co., dropped in our booth for a few moments.

After working hours, we, like 332½ other mechanical executives and supply men, visited the Port of Missing Men. We missed Byron Davis this year, but—we got an eyeful of Snow White and the Seven Dwarfs. We had a nice visit with Joe Dunn of the Vulcan Proofing Company. Joe and his crowd occupied the Dutch Bridal Suite. We don't know why, because Joe's no groom. While talking to Oscar Roesen, Vice President of the Wood Newspaper Machinery Corporation, he quoted Henry Wise Wood as saying, after recovering from his recent illness, "The Lord didn't want me and the devil wouldn't take me, so I am still here," for which we're glad. Met and chatted with D. T. Stephenson, Tony Messina and Dr. Schorger of the Burgess Cellulose Co.

While Ernie Booth of the E. A. Booth Rubber Company was attending the Mechanical Conference, great things were happening in Cleveland. Upon his return he found himself the grandfather of a new baby boy.

Our thanks to you, Joseph Oswald, of the International Newspaper Supply Company, for pointing out "who's who" at the Conference to members of the P-Double-E staff. Bill Wright of the Goss Printing Press Company deserves a lot of thanks for the very same reason.

After all, a mechanical conference wouldn't be a mechanical conference without Bill Grenier and "Scottie" Campbell and their flower girl. This custom of passing out flowers each day of the Conference is a swell idea—everybody agrees to that.

Another old friend from past Conferences is Mrs. Vera Cushman, but this year A. L. Cushman of the Cushman Electric Company was with her, and we believe both of them enjoyed and profited by this Conference. Your Reporter had a swell chance to show how little French he knew when he met Bill Smythe of Walter Scott & Company. Bill put us through our paces pronouncing the names of French Canadian newspapers. We met both W. H. Chatfield and Wm. Eckely of The Rapid Electrotype Company, and they invited us to a movie and right here we want to tell you if you get a chance to see this movie of the Rapid Electrotype plant and its branches, by all means see it.

Lee Hammond of the Hammond Machinery Builders was very much in evidence. We talked to him for a few minutes when he was setting up his display Sunday night, and then we didn't get a chance to contact him after that, primarily because his booth was surrounded by mechanical executives deeply interested in Hammond equipment.

Conspicuous for his absence was Sam Seaman of the Imperial Type Metal Company, but Grant Wilbur and Claude Perkins did the honors in their booth, and when we say did them, we mean "did them." Another newcomer to the mechanical conference who covered a tremendous amount of ground, was Larry Martin of Frazier Processes, Inc. He attracted a great deal of attention displaying the new "Frapmoist" unit in the company's booth.

One of the high spots of the Mechanical Conference was a trip to the Toronto *Globe* and *Mail*. Over there, mechanical executives were sure to find the genial Mr. Jampol, who would gladly tell you about his installations on that job. And if you didn't see the big blue and white signs of General Electric (you couldn't miss them) you were sure to see H. F. Blankenbiller and others of General Electric holding forth on the merits of G.E. equipment.

Ed Niles of Niles & Nelson, distributors of Goodrich rubber rollers, was decidedly on the job at the *Globe* and *Mail*. A "small" sign informed the visitors that Goodrich rollers were used on the presses. In that pressroom you wouldn't need any sign to see the new Hoe super-production presses and there wasn't a thing about them that George Devyr and other Hoe representatives wouldn't gladly explain.

Getting back to the exhibit halls, as you turn left inside the door, you found two or three very busy men—all demonstrating. Fred Billker of Milwaukee Saw Trimmer Corporation, Mr. Sears of Sears, Ltd., and E. O. Vandercook, put on a continuous performance—one demonstration after another—from early morning until late at night, and across the aisle Messrs. Knowles Senior and Junior of H. B. Rouse & Company kept pace with them. We don't want to be put on record, but as far as we can remember, the Thompson Cabinet Company was also a newcomer at the Mechanical Conference. H. G. Thompson says his company also is expecting a "blessed event" which will be announced in *Printing* EQUIPMENT *Engineer* at a later date. We would like to ask J. W. Foster of Tingue, Brown & Company, manufacturers of blankets, how you can make those little spinning coins stop so that the "spinner" won't have to stand treat. We would like to know that one.

C. Fritschi of Lake Erie Engineering Corporation, who had a display at the Conference, says his associates are working on a new packless dry mat and are very enthusiastic about its possibilities.

We missed A. J. Cline, but we had a nice visit with Jack Park, and from the pleased look on his face we know that he was batting well up to a thousand per cent for the Cline

(Continued on Page 49)

Mechanical executives attending Toronto Conference. Left to right: Chester M. Spooner, Mechanical Superintendent, Pawtucket (R. I.) Times; *Andrew P. Palmer, Mechanical Superintendent, Woonsocket* (R. I.) Call; *Max Kramer, New Bedford* (Mass.) Times-Mercury; *Carlton A. Broga, Assistant Mechanical Superintendent*, Standard, *Woonsocket* (R. I.) Call; *T. Peck, Pressroom Foreman, New Bedford*, (Mass.) *Standard Times-Mercury*.

Development

In mechanical equipment, accessories and materials for making rubber printing plates for many sorts of printing discussed.

By H. H. HEINRICH*

WITHIN the last few years the mechanical equipment, accessories and materials used for the production of molded rubber printing plates have all been improved to such an extent that plates of the highest printing quality are being made in many plants with ease and economy. Due to the simple method of manufacture, the "stretch" of these molded rubber plates is reduced to a minimum. These "non-stretch" plates are particularly adapted to a wide range of multi-color printing on many different kinds of stock.

At the present time, with the proper mechanical equipment, and the essential materials, a first-class molded vulcanized rubber printing plate can be produced in approximately ten minutes. The same mold can be re-used to make any desired number of duplicate rubber plates. Each plate is correctly vulcanized while, at the same time, it is of the exact thickness required, and the entire printing surface of the finishined plate is of uniform height. The mold, which is also made in about ten minutes, is produced with a piece of special material known as bakelite or similar molding material, about 0.160 in. thick. With such materials accurate molds can be made from any of the following kinds of originals:

Zinc or copper line engravings of any subject; single color, (like reproductions of ruled forms, for example) and those engraved for printing designs, illustrations, etc., in two, three, four or more colors. Copper or nickel electrotypes of the same kinds of photo-engravings mentioned. Copper or zinc halftones from 60 up to 100-line screen. Type matter torms of almost every description, including large forms of display and advertising typography, solid pages of text, type-and-rule forms, smaller type forms for imprints, labels, food wrappers, letterheads, corner cards for envelopes, etc. Combination forms of type composition and line engravings. Special high relief metal plates, and "reverse" plates, of copper, brass, lead or other metal, such as those (for example) designed for heavy multi-color printing on blanks for corrugated board and solid fibre shipping containers. Molds, for the making of rubber printing plates, may also be produced from hand-engraved hardwood originals and from good stereotype plates.

It is a significant fact that some few years ago, rubber printing plates were used only to a limited extent in printing various types of sheet material. However, with the constant improvement in the printing qualities of molded-vulcanized rubber printing plates, along with related new developments, the economies made possible by these plates was soon recognized in many important manufacturing fields. Today, the newer makes of precision rubber printing plates are being used successfully in the printing of hundreds of different kinds of paper, paper board and other sheet materials.

The modern makes of precision rubber printing plates, along with improved types of ink, paper stock, etc., have made higher press production speeds possible. These rubber plates are also effecting savings in printing ink and press makeready time, in the many plants where they are being used for long runs of both single-color and multi-color work. And, in numerous instances, these molded rubber printing plates have been the direct means of developing new lines of specialty printing, such as (for examples), the newer types of water-proof, color-printed cement bags and ice cream containers, fan-fold multiple printed forms in several different paper-tints, moth-proof garment bags, metal-faced paper lables and large sizes of heavy duty mailing envelopes.

Both aniline inks and inexpensive types of oil-base inks are now being utilized in printing a wide variety of paper and paper-board specialties, from molded rubber plates, in two, three or more colors. Recent surveys taken throughout the bag and envelope manufacturing industries, have revealed that from 95% to 97% of these products which call for printing are now being printed from molded rubber plates. In this connection, one of the new models of combination web-fed multi-color rotary printing press and automatic bag-making machines is producing up to 1000 finished paper bags per minute, each bag printed with a three-color design. This rapid color printing is done with the improved make of "non-stretch" precision molded rubber plates which insure close register of the three (or more) colors.

Throughout the paper converting industries and in the allied printing trades, the perfected makes of precision molded rubber printing plates are being used to an ever increasing extent, both on many different styles of rotary presses and on practically all makes of flat-bed printing presses.

Included among the separate users of the precision molded rubber printing plates are those mentioned as follows: Commercial letterpress printers in general. Specialty printers of the groups producing food and package wrappers, labels, tags, paper tape printed with continuous design, milk bottle caps, beverage glass coasters, posters, hangers, window display cards, etc. Manufacturers of bags and envelopes, made of cellophane and other transparent cellulose materials, kraft, glassine, vegetable parchment, waxed paper, and other materials. Makers of paper and cardboard advertising novelties. Manufacturers of greeting cards and holiday folders. Paper mills of the class producing tinted-one-side paper stock, and all-over designed papers. Manufacturers of fan-fold multiple office and factory forms. Manufacturers of folding paper boxes, cartons and display containers. Manufacturers of business and mailing envelopes. Set-up paper box manufacturers. Makers of loose-leaf record forms and of ruled paper forms of many styles. Manufacturers of corrugated board and solid fibre shipping containers. Manufacturers of waxed paper wrappers for bread and numerous kinds of bakers' cake.

In the development of precision molded rubber printing plates, credit is due to the larger rubber manufacturing companies for having perfected a complete line of rubber materials most essential for the production of oil-resisting rubber plates. These materials include unvulcanized sheet rubber made in a number of different grades and types; adhesive fabrics for mounting the molded vulcanized rubber plates to press cylinders, or to metal bases; special adhesive cloth insertion material for producing laminated, "non-stretch" molded rubber plates; and, cements for attaching molded rubber plates to metal and wood bases. To provide for soft, medium-hard, and hard but pliable molded rubber plates, the unvulcanized sheet rubber is supplied in several different degrees of Durometer hardness, ranging from 45 to 85. It is also supplied in a number of standard thicknesses, and in rolls of any desired width or length.

The improved makes of adhesive fabrics are of exceptionally uniform gauge; made in two standard thicknesses, *i.e.:* 0.015 in. and 0.020 in. and are coated on both sides with a strong, tacky rubber compound. These adhesive fabrics are used not only in attaching molded rubber printing plates to press cylinders, but also in attaching the plates to suitable metal saddles which, in turn, may be placed on the plate cylinders of a rotary press, like a curved electrotype plate, and in correct registered position. The use of the metal saddles in conjunction with sets of mounted molded rubber color plates, makes it easy for a pressman to register the individual plates on the plate cylinders of a multi-color rotary press, for the printing of two, three, four or more colors. This system is particularly advantageous with plate cylinders having a grooved base for plates. By means of register hooks, the metal saddles containing the rubber plates can be placed and secured in any required position on the grooved plate cylinders.

On flat-bed cylinder printing presses, this same method of rubber plate mounting may be followed in connection with any of the patented all-metal plate-mounting bases. In the first place, with a sheet of the adhesive fabric, each molded rubber plate is firmly attached to the surface of a sheet of metal about 0.050 in. thick. This metal may be hard lead, zinc, copper, aluminum or other suitable metal. It is practicable to attach each complete plate, by means of a sheet of the adhesive fabric, in preregistered position, to the surface of a patented plate-mounting base. For long runs of color work, however, it is a good plan to have the edges of the metal "backing" for each rubber plate finished with a bevel of 20 deg., so that each plate can be attached to and registered on the plate-

(*Continued on Page 50*)

* President, H. H. Heinrich, Inc., New York, N. Y.

Toronto Conference

Of A.N.P.A Mechanical Department produces quantity and variety of technical discussions—Frederick Keefe New Chairman

A WIDE range of subjects related to newspaper production occupied the attention of approximately 300 registered mechanical executives and 130 guests at the Twelfth Annual A.N.P.A. Mechanical Conference in Toronto. The Conference was held at the Royal York Hotel, June 6, 7 and 8. A number of the speakers have participated in previous mechanical conferences. Some new talent appeared on the program, too, this year. For the second time in the history of the mechanical conferences, a portion of the program was set aside for the smaller newspaper executives to discuss their production problems.

In view of the renewed activity among publishers to reduce newsprint roll widths, the topic *Ways and Means To Reduce Newsprint Roll Widths*, prepared by the Committee on General Subjects and presented by John J. Shea, Production Manager of the Worcester (Mass.) *Telegram-Gazette*, was of great interest, Other topics engaging the attention of mechanical executives were R.O.P. Color Printing, Preparation of Photographic Copy, Uniform Style Sheet for the newspaper composing room, cost-finding, a new one-man photo-engraving method, effect of humidity on newsprint, ink misting and subjects related to properties of stereotype dry mats, cooling plates and the molding operation, and newsprint waste conservation.

Kauffmann Resigns

On the last day of the meeting, S. H. Kauffmann, Assistant Business Manager of the Washington *Evening Star*, announced his resignation as Chairman of the A.N.P.A. Mechanical Committee. Mr. Kauffmann has acted as general chairman at all conferences for the past six years. A hearty vote of thanks was extended to him for his splendid services to the Mechanical Department, as chairman of the mechanical committee and his work at the annual conferences.

Keefe New Chairman

Fred H. Keefe, publisher of the *Newburgh-Beacon* (N. Y.) is the selection of the A.N.P.A. Board of Directors to replace Mr. Kauffmann. Formerly, Mr. Keefe was associated with the Mechanical Department as a member of the Committee. He has presided at various conference sessions, is well known and is well liked by mechanical executives generally.

Moving Pictures

Although all of them were not scheduled on the stated program, three moving picture films were shown especially for the benefit of mechanical executives.

On Monday afternoon after the General Session, Intertype Corporation showed a film explaining in technical detail the design and construction of its two-letter 18 and 24 pt. display matrices. On Tuesday morning, Imperial Oil, Ltd., presented *The Inside Story—A Motion Picture Film on Lubrication*. The Eastman Kodak Company showed its film, *An Evening of Color*, on Tuesday evening. The film explained Kodak's new Kodachrome color film which will be furnished in standard film sizes before long.

Editor's Note

Because of the emergency which necessitated the Editor's abrupt departure from the A.N.P.A. Mechanical Conference, he wishes to acknowledge with thanks the hearty assistance given by the several persons listed below in preparing this technical report about the Toronto Conference.

Acknowledgment is made to the following in particular:

The Editor's Associates
Dry Mat Bill
Earl Anderson
George Fuller
E. P. Hamilton, who took the candid camera pictures
Impression Pete
Albert Lengel
Leon A. Link
Mort Moeder
Walter Ogden
Rambling Reporter
John J. Shea
and several other executives.

Rambling Reporter

Our Rambling Reporter met and talked with manufacturers and suppliers and their representatives throughout the duration of the Conference. See his friendly account on another page.

Monday Morning

Conference Opening

General Chairman Kauffmann opened the convention Monday morning in the Ball Room of the Royal York Hotel. Mr. Kauffmann introduced Hon. Ralph C. Day, Mayor of Toronto, who made a brief address of welcome.

The meeting was then turned over to Howard J. Lamade, Assistant Business Manager of the Williamsport (Pa.) *Grit*, who immediately took up the photo-engraving session. W. S. Lund, Art Director of the Toronto *Telegram*, acted as Vice Chairman.

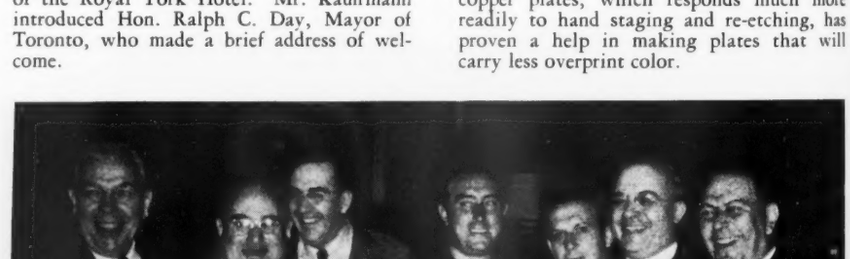
Engraving for R.O.P. Color

The first speaker, Mechanical Superintendent H. L. Foster of the Minneapolis *Journal*, discussed *Engraving For R.O.P. Color*.

Mr. Foster related some of the experiences encountered over a seven-year period in the attempts of the Minneapolis *Journal* executives to do creditable r.o.p. color work. Quoting from Mr. Foster's address, we believe our readers can gain an idea of the results of experimentation and study of color work in the *Journal* plant. An abstract of his paper follows:

"Our first crude attempts seven years ago quickly taught us that, although the original start of the page was with the advertiser and his artists, our most serious troubles developed in the pressroom, and that some of those troubles were fundamental and could not be corrected. Consequently, we were forced back from the pressroom to the engraving room, the advertiser and his artists, where, as in other manufacturing processes, the finished product is planned from its inception by the designing engineers; in this case the advertiser and artists.

"There are a few engraving room tricks that our engravers have employed to help out in the pressroom, such as shooting a low or flat negative to allow the etcher and finisher to make a gray plate that will carry less ink. Also, they have found they can be of considerable assistance to the pressroom by hand staging or painting in their high-lights and re-etching. Also, making the color prints on copper plates, which responds much more readily to hand staging and re-etching, has proven a help in making plates that will carry less overprint color.



Left to Right: L. W. Woelfel, Mechanical Superintendent, Buffalo (N. Y.) Evening News; *Charles W. Miller, General Superintendent, Hearst Color Plant, Chicago; Walter Ogden, Pressroom Superintendent, Cleveland* Press; *E. G. Ahearn, General Mechanical Superintendent, Hearst Newspapers, New York; G. Adkins, George R. Morrill Company, Philadelphia* Inquirer; *Joseph Oswald, Pressroom Superintendent, Philadelphia* Inquirer.

Two of the ladies attending the Toronto A.N.P.A. Mechanical Conference. Left: Mrs. Kenneth R. Rice (guest) Evansville, Ind.; extreme right: Mrs. Walter Ohlrogge; second from left: Parker Hart, Tingue & Company; third from left: Walter Ohlrogge, Evansville (Ind.) Courier.

"However, we believe that the making of r.o.p. color plates in the engraving room is not now the color problem. The real problem is in educating the advertisers and the layout artists and Ben Day men on the limitations involved in printing overprint color on newsprint paper at high speed, and also educating them to the fact that some outstanding results can and will be obtained in r.o.p. color printing if the artist and the man laying the Ben Day will use the proper technique and then follow their efforts through and see that the results conform to their original idea.

"For r.o.p. color printing, we at *The Journal* have been much more successful with, and consequently prefer, the Ben Day to other methods because we can more easily control the amount of color used, minimize the tendency of the overprint to offset or pattern when slightly out of register and still get creditable results with a normal flow of color, on the printed sheet.

"Practically any desired intermediate color or shade can be obtained with Ben Day screen by cutting the solids to their proper percentage of one hundred, so as to give the desired intermediate color or shade and still not flood the sheet by overprinting. For example, when working with greens, if a medium shade of green is needed, we have found it much more satisfactory to use 50 per cent of a solid on both the blue and yellow plates, rather than try to overprint both solids. If a yellow green shade is needed, 75 per cent of a solid on the yellow and 25 per cent of the blue plate. If a blue green is needed, 25 per cent of a solid on the yellow and 75 per cent on the blue plate, and if a graygreen is needed, 33⅓ per cent on all three plates—yellow, blue and black.

Getting into both hard packing and r.o.p. color for a moment, it may be of interest to note the improved results *The Journal* obtained during about a year's experience with this method of laying Ben Day.

"The screen method of overprinting solids was largely responsible for the improvement just noted; however, better newsprint paper and better black and colored inks were also a big factor. The newsprint weight was increased from thirty-four to forty pounds. The sheet formation materially was improved to help prevent show-through. The sheet was made much harder and with all the calendar available to hold the inks on top. And, the inks were balanced, as far as possible, to trap and lay and set on the improved newsprint.

"We found when working with process plates that any variation from hair-line register gives the subject a confused appearance, makes it appear flat, and also quickly starts a pattern. We believe the reason these plates are so sensitive to perfect register is because each plate does carry the complete image and the full detail.

"In *The Journal* plant, instruction from the advertising department that we are to run a color page or a number of color pages in the same issue, causes no special concern in our mechanical departments. These departments ask only a few hours earlier close on the color pages to allow for plate routing, checking and register. But we are vitally concerned as to how the plates are to be made, and if Ben Day, about the artist who is to supervise the laying of the color on the plates and his Ben Day men and their knowledge of the conditions under which the pages must be printed and their ability to get desired intermediary colors and shades by overprinting screens rather than solids or heavy undertones.

"This aspect of the work is our chief worry, because a number of sad experiences have taught us that if the color has not been properly laid on the engraver's plate, there is nothing we can do about it during the run in the pressroom except to cut the color and print a weak, anemic looking page, or to run normal color and create a very objectionable show-through and offset condition.

"On the other hand, if the color is properly laid to meet newsprint paper and high-speed press conditions, a normal flow of color can be maintained and satisfactory printing can usually be assured.

"One of the big problems facing pressrooms today is to carry a full flow of ink on heavy pages, either black or color, and at the same time avoid show-through, strike-through and offset difficulties. When our local and national lay-out artists realize this condition, and also realize how hard the pressmen, ink and paper men are working to overcome it, I feel confident that they will stop asking mechanical departments to carry an impossible and unnecessary load of overprint color on the sheet.

"As mentioned by Fred Hudson in a mid-winter meeting in Chicago some time ago, a recent improvement to better color printing, as well as better printing of 'show window pages,' such as first page society, first page amusements, etc., is the pulling of a press proof on these plates and then cutting of a sheet of standard makeready and pasting same on the back of the casting box mat and recasting for the press run. The print from plates cast from these mats shows definitely finer highlights and better contrast. Obviously, this can only be done where time will permit.

"When the advertisers, national and local artists, engravers and the other mechanical departments involved, reach the stage where they have a more thorough and sympathetic understanding of one another's problems and are hitting as a unit, I feel confident that the general added improved results will justify a much more generous use of r.o.p. advertising color in newspapers."

A.N.P.A. Mechanical Committee

Although it is expected there will be some changes in the personnel of the A.N.P.A. Mechanical Committee, the membership of the committee at the present time is as printed below. S. H. Kauffmann who has served as chairman of the committe for six years, resigned at the Toronto meeting.

Chairman, Fred H. Keefe, Publisher, *Newburgh (N. Y.) Beacon-News.*

Vice Chairman, Wm. L. Fanning, Manager, *Westchester County Publishers, Yonkers, N. Y.*

E. G. Ahearn, General Mechanical Superintendent, *Hearst Newspapers, New York, N. Y.*

Tennant Bryan, Asst. Business Manager, *Richmond (Va.) News-Leader.*

John A. Burke, Production Manager, *Gannett Newspapers, Rochester, N. Y.*

A. H. Burns, Mechanical Superintendent, *New York, Herald-Tribune.*

Howard Lamade, Business Manager, *Williamsport (Pa.) Grit.*

John E. Martin, Production Manager, *New York, Sun.*

Donald P. Miller, Manager, *Allentown (Pa.) Call.*

Walter Ogden, Pressroom Superintendent, *Cleveland, Press.*

John W. Park, Production Manager, *Chicago, Tribune.*

F. W. Schaub, Business Manager, *Decatur (Ill.) Herald and Review.*

E. R. Whitrod, Assistant Business Manager, *Montreal (Can.) Star.*

W. E. Wines, Manager, Mechanical Department.

Executives mostly from Gannett Group of Papers. Left to Right: Granville Hutchinson, Mechanical Superintendent, Troy (N. Y.) Record; *Adam Schreiber, Stereotype Foreman, Rochester* (N. Y.) Times-Union; *B. F. Garrity, Mechanical Superintendent, Hartford* (Conn.) Times; *Eugene D. Jagareski, Mechanical Superintendent, Albany* (N. Y.) Knickerbocker News; *Richard M. Seymour, Representative, Matrix Contrast Corporation; Elmer J. Frederick, Rochester* (N. Y. Democrat *and* Chronicle; *George W. Frank, Composing Room Foreman, Rochester* (N.Y.) Times. *The gentleman walking in the foreground is not identified—perhaps he will introduce himself to readers of* Printing Equipment Engineer *with whom he is not acquainted.*

Left to Right: Earl Burwell, Stereotype Superintendent and John R. Donohue, Pressroom Superintendent, Cincinnati, Times Star; *Harvey Robinson, Detroit* Times; *E. P. Doyle, Mechanical Superintendent, Toledo* Blade.

negative etch from 0.004 in. to 0.006 in. is secured in his plant. He asserted the process is one of the greatest in his experience of 38 years in the trade.

Monday Afternoon Meeting

Composing Room Session

In the absence of both Chairman J. E. Martin, Production Manager of the New York *Sun*, and Vice Chairman Deo A. Padgett, Composing Room Superintendent of the Milwaukee *Sentinel*, John A. Burke, Production Manager of the Gannett Newspapers, assumed the role of chairman.

W. W. Warfel, Chicago Manager, Chemco Photoproducts; Russell B. Miller, Mechanical Superintendent, Bloomington (Ill.) Pantagraph; *Leon A. Link, Composing Room Superintendent, Akron (O)* Times-Press.

Photographic Copy For Newspaper Reproduction

W. S. Lund, Art Director of the Toronto *Telegram* discussed *Preparation of Photographic Copy for Newspaper Reproduction.* He offered as a solution to the idea that poor original copy is responsible for poor pictorial reproduction in newspapers can be avoided by copying pictures. This method includes poor pictures which are the only ones procurable, those which are framed and those on which retouching work by the artist is not permissible.

Said Mr. Lund:

"It is here, in this difficulty, where a very useful and a very often neglected method of improving the copy for the engraver can be employed. That is by copying the original picture.

"In the case of the valuable portrait or picture, it can be rephotographed by dry plate methods and a photographic print made which can be retouched and used in any way required, and the original sent back to its owner unharmed in any way.

"The small photo or snap-shot can be copied and enlarged to a more convenient or possible size for reproduction, and which can also be more easily retouched, and, if necessary, again enlarged when making the screen negative."

"Copying does not necessarily mean the employment of an expert photographer and the equipment needed for copying is not an elaborate or expensive one.

"Retouching for newspaper illustration does not demand the highest degree of an artist's skill. The whole secret lies in knowing what to do and what not to do. Avoid outlining on pictures, particularly on portraits; where a head is merged in the background, retouch a lighter or darker tone as a background, as the picture may need, against the head, rather than put a line round the head to define it, especially if the photo has to be enlarged in the cut.

"The strengthening of weak detail in the shadows, halftones, or high lights of a picture should be done in a bold free manner with a brush, and not in a finnicky manner with a series of fine lines. The bold treatment, if properly applied, is taken care of with the coarse screen of newspaper cuts and subsequent printing."

He recommended an air brush as an invaluable tool in securing proper effects. The artist should work under the supervision of the engraver. He passed around specimens of retouched photographs to illustrate his disdussion.

Shellac for Photo-Engraving

Morton Noble, Manager Shellac Division, Valentine & Company, discussed *Shellac for Photo-engraving.* Besides a historical resume of shellac he defined the various grades. Shellac deteriorates with age and should be kept in a cool place. He asserted some photo-engraving executives have found a low grade shellac better suited to their purpose than a higher grade.

Scherer Rolup Process

Ernest Scherer first explained his Rolup Process at the Detroit Mechanical Conference. On the Toronto program were introduced two photo-engraving executives who have been using the process in their plants. These were Engraving Superintendents Fred F. Uhl, Cleveland *Plain Dealer*, and M. G. Lowe of the Louisville *Courier-Journal* and *Times*.

Mr. Uhl stated he liked the process for halftone work but when using it a somewhat different negative for halftone work is required—plenty of color and large dots. To secure the best results a flat with four or five pictures and approximately 11 in. by 14 in. is best. About 18 min. is required to complete such a flat. Cuts having 0.005 in. depth made by the Rolup Process, he reports, print clearer than cuts 0.006 in. or 0.007 in. deep etched in the regular way.

Mr. Lowe also reported favorably on the Rolup Process which has been in use in his plant for more than six months. A normal

Proofreading

Mr. Burke first called upon George I. Campbell, Proofreader of the Hamilton (Can.) *Spectator*. Mr. Campbell discussed *Proofreading.*

In defining the proofreader, Mr. Hamilton apparently agrees 100 per cent with the Chicago 1937 Conference remarks of Leon A. Link, Composing Room Superintendent of the Akron *Times-Press*. Mr. Hamilton stated:

"Various opinions are held as to the most desirable material for proof desk work. Some look upon the desk as more or less an 'old men's home,' where employees who have outlived their usefulness in other departments may be relegated to spend their last days of productive endeavor. Others claim that young men with college education or other advanced academic training are good material for the proofreader's role. Some claim a thorough knowledge of printing a necessity, while others view this as of no particular moment. Personally, I would take a middle course. Educational background is, of course, essential. Experience on the floor is likewise of considerable benefit, and I am of the opinion that machine operating experience is a great advantage to the proofreader. I contend, however, that the possession of any, or all, of these qualifications does not suffice. A person must have a natural aptitude for the work. I have seen university graduates, clever

Left to Right: Eddie Gordon, New England Newspaper Supply Company; L. C. Penry, Mechanical Superintendent, News *and* Record, *Greensboro, N. C.; B. F. Bunn, George H. Morrill Company, New York; William Wright, Goss Printing Press Company, Chicago.*

A Few Roses Tossed Our Way

Printing EQUIPMENT *Engineer* had a lot of roses tossed its way by mechanical and production executives at the Toronto A.N.P.A. Mechanical Conference. We couldn't hope to remember all of the comments, but here are a few:

Will L. LaCure, Pressroom and Stereotype Foreman, Monroe (Mich.) *News*, said *Printing* EQUIPMENT *Engineer* is the most helpful paper he receives.

Ed Mills introduced us to Whitelaw Reid of the New York *Herald Tribune*, who complimented us on the nice appearance of our June issue.

Arthur Bagwill, Supt. Composing Room, of the Sacramento (Calif.) *Bee*, says he enjovs *P-Double-E* very much and finds it exceedingly helpful.

Bob O'Connor, Machinist, of the Warren (O.) *Tribune-Chronicle*, says of *Printing* EQUIPMENT *Engineer:* "Best in the printing field."

Fred R. Connell, Supt. Composing Room, Atlanta (Ga.) *Journal*, advised us he reads every word in *Printing* EQUIPMENT *Engineer.*

Harry Hinmarsh, Toronto *Star*, says: "*Printing* EQUIPMENT *Engineer* is very well done."

"I have my Reference Book at my finger tips constantly," says Frank Oehmke of the *News-Times*, South Bend, Ind.

Some mechanical executives have complete sets of *Printing* EQUIPMENT *Engineer.* One of these men is G. Henry LaJoie, Machinist, of the Worcester (Mass.) *Evening Post.*

Here are a group of other visitors who declare *Printing* EQUIPMENT *Engineer* is "the tops":

Jack Burke, Production Manager, Gannett Newspapers.
George Kent, Pressroom Supt., New London (Conn.) *Day.*
Frank Parker, Mechanical Supt., Staten Island *Advance.*
William Gustafson, Pressroom and Stereotype Supt., of the New Castle (Pa.) *News.*

We wish we could remember the names of many other executives who complimented us on the June A.N.P.A. Mechanical Conference issue of *Printing* EQUIPMENT *Engineer.* We certainly appreciated each and every one of the comments. We also welcome constructive criticism.

in the extreme, who just could not detect errors, while I have noticed other comparatively poorly educated people who seemed to sense errors, even though lacking the ability to make the proper corrections. To summarize on this point, a person is either a natural proofreader or he is not, and the selection of a proof desk personnel must take this fact into serious consideration if the desired efficiency is to be attained.

Mr. Hamilton pointed out that he considered educational background is essential and machine operating experience is beneficial. He said a proofreader must possess personal aptitude and that it is either natural for the person engaged in the work to detect errors or it is not. He also believes a proofreader should reduce the marks on the proof to a minimum without sacrificing the objective. He told of a survey he had made at the Hamilton *Spectator* in which 10,000 proofreaders' marks were checked. Of the errors, 20 per cent were due to mechanical imperfections, 35 per cent were changes of copy and style errors and 45 per cent were operators' errors. He believes compound words and the combining of two words into one should be eliminated as much as possible so as to get an additional spaceband into the line and eliminate hand spacing to some extent.

Mr. Hamilton said, "In conclusion, I contend it is within the province—and certainly it is within the power—of the A.N.P.A. to explored the possibilities of and to recommend to its members a uniformity of style and general printing practices as related to the proof room department, the adoption of which would heighten composing room efficiency, reduce composing room expenditure, lessen composing room confusion, and expedite production. I would say it is possible to adhere to accepted usages and at the same time achieve these accomplishments without lowering the standard of our newspapers.

At the conclusion of Mr. Hamilton's remarks several spoke briefly regarding proofreading and a show of hands was asked for of those who are making an effort to train apprentices for proofreaders. Several told of using apprentices as copy-holders for six-month periods prior to starting the boys in on other composing room work. This enabled them to determine if the boys had the proper educational background and natural ability to become proofreaders after finishing the training.

Unique Cost-Finding System

A. M. Jullien, Composing Room Superintendent of the Lansing *State Journal*, spoke on *A Unique Cost-Finding System For the Composing Room.* The system in use in his plant provides for a unit rating of each employe. This rating is posted daily in the composing room so that each employe is at all times familiar with his hours worked, hours on units, his total units and his unit hour. At the close of the work week a new sheet is posted. The standard for production required 60 units of work per hour, but as a result of this system he had raised the average to 73 units. He expressed the opinion the system enables him to locate more readily the troubles that tend to interfere with production.

Mr. Jullien explained: "This unit system is founded upon a time study and the first operation necessary to installing it is a careful time study of each individual operation in the composing room.

The purpose of this study is to set up a *reasonable* standard for each class of work and this standard *must* be fair alike to the men and to the office.

"These standards for the different classes of work are what any workman of ordinary ability, who pays attention to his work, can accomplish.

"Now something about the mechanics of the system. Any measuring plan necessitates a unit of measure. The unit of measure used in this system, as a common denominator, we refer to as a 'unit,' composed of effort and relaxation. In other words, it represents the amount of productive human power which a normal man, working at a normal pace and under normal conditions, will deliver in one minute. Sixty units represent a normal or standard hour's work.

"As an example, let us take the case of a linotype operator and assume that a study has shown that, under normal conditions, the normal operator's production is 1600 lines of minion in an eight-hour working day. That having been established, we are interested in determining the unit value. We do this by dividing the normal units, 480*, by the production units, 1600 and we learn that our unit value is three-tenths per line, for minion.

However, I shall go a bit further to show you how production deviating from 1600 lines, standard, affects the unit rating. We will assume that in a like period of time the operator set 1800 lines. To change that to our corresponding unit value we will multiply the production (1800) by the standard (1600-line value) three-tenths of a unit, and learn that we have 540 units, or 60 units over the standard requirement, and the operator has a unit hour of 67½ as against the standard 60-unit hour. If an operator sets but 1500 lines, he falls below the standard 60-unit hour and has a 56-unit hour and his rating would appear in red on the daily Posting Sheet. I believe that these examples give you an idea how quickly fluctuations in individual or group production come to light with this system.

"Irrespective of size, a unit value is established for all type set on Ludlow or out of cases. All lost time—such as dumping takes, waiting for copy, machine time and distributor stops—over which the operator has no control, is credited on the time card, thereby not affecting the unit hour of the employee. For corrections on the ring machine, two lines for one are allowed the ring operator and deducted from the operator responsible.

"The same rule applies to the ad alley. All of you men know that some ads are very simple to compose, some are tough, others tougher; so this is the way that problem is taken care of: The ads are divided into six different classifications, numbered from one to six. The more complicated the ad, the more time the ad man is allowed to build it. For instance, in our composing room, if an ad man receives 150-inch ad to build under Class 3, he is allowed 96 units to produce the ad. If he were to receive an ad of the same size under Class 5, he is allowed 240 units. For any lines of type he may set from type case or on Ludlow, he receives additional credit. In some cases you will discover that your ad foreman finds it difficult to judge between, we will say, a Class 4 or Class 5 ad. Under these circumstances, what we term 'process allowance' takes care of that situation.

"Class 1. Basing of stereo or electro (no machine type) and pickups with minor alterations.

"Class 2. Stereo, Underlayed Zinc or Electros, little or no machine type, and Classified display, no border or hand type.

"Class 3. Simple display, white space and cuts predominant.

"Class 4. Simple display, cast area and white space small.

"Class 5. Irregular display, cast at angles, etc.

"Class 6. Complicated display, small entries boxed and at angles.

Each morning a clerk collects the previous day's job tickets and proceeds to tabulate the information on the Daily Time Card which provides space for such items as employee's name, his total hours worked, the hours on day work, on measured work, his required units on Measured Work, his Actual Productive Units, his Premium Units, if any, and the Unit Hour rating. After which the Posting Sheet is made out and the Time Cards preserved for reference, if needed."

After Mr. Jullien's remarks were finished, a number asked questions regarding the details of operating this system. It was brought out that the rating determined the amount of pay of the employees to a considerable extent and that many as a result of the method were receiving additional compensation above the regular rate.

At the conclusion of the cost system discussion the topics questions listed on the program were taken up.

**8 hours.*

Tuesday Morning Session

E. G. Ahearn, General Mechanical Superintendent, Hearst Papers, New York, presided at the Tuesday morning session. C. J. Strang, Night Mechanical Superintendent, the New York *Times*, was Vice Chairman.

Effect of Humidity Upon Newsprint

The Effect of Humidity Upon Newsprint was discussed by J. P. Grant, Paper Chemist of the New York *Times*. The discussion was related to experiments conducted in the pressroom. The conditions under which the experiments were conducted were given as well as the results of the experiments. Mr. Grant stated that in using web breaks while on the press as a measuring rod, that the break record was always better in the summer months than in the winter. He defined humidity and relative humidity. Paper is a heterogeneous mixture of wood pulp containing varying proportions of a chemical substance known as cellulose. One of its physical properties is that it is hygroscopic; it contains a certain quantity of water, or moisture, either absorbed within the fibre, or adsorbed on the fibre, or both, and the quantity of the moisture present is dependent upon the quantity of moisture in the air to which the paper or cellulose is exposed.

"A very interesting relationship was noted in a short time, to the effect that the higher the humidity in the pressroom the fewer were the web breaks. This was considered so interesting that we went so far as to artificially increase the humidity in the reel and pressroom by exhausting live steam into the outlet of several fans which supply these places with fresh air.

"The data would indicate that by the simple expedient of raising the press and reel room humidities we could reduce the number of paper web breaks, especially during the winter months when the relative humidity of the reel room air is reduced in some instances to 10%. The only breaks affected are those due to paper failure alone. From the data, again, by raising the average humidity from say 40% to 60% we could expect to reduce the paper breaks by half.

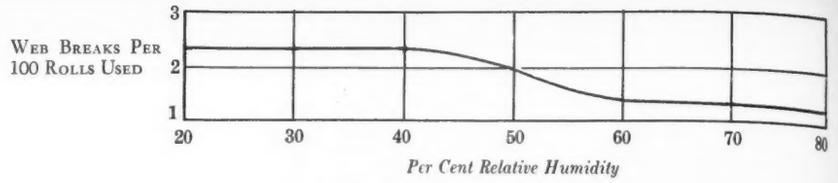
"From the data it would appear that little or nothing is to be gained by raising the humidity above 60% relative humidity.

"From the moisture content of average newsprint we learn that at 50% relative humidity the paper contains, under equilibrium conditions, 9.0% moisture after progressing to this humidity from a lower one. Over a considerable period we find that this is the approximate content, whether the sample originally contained more moisture than this, or less.

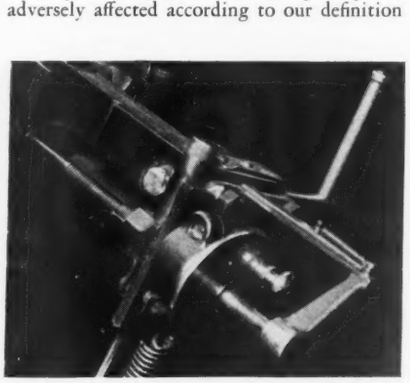
"What the average moisture content of any newsprint might be as received in any pressroom, we of course cannot say. Were this average moisture much different from the amount in the air, with which this newsprint would be in equilibrium, changes undoubtedly will take place in the moisture content and in other physical characteristics. Those, and other factors, will govern the behavior of your newsprint, in your own warehouses and pressrooms.

"In all these qualities measured, it is seen that by the increase in humidity they are adversely affected according to our definition of a good printing newsprint. The loss of quality is fairly small and gradual up until 50% relative humidity is reached, but beyond this point the rate of change is greatly increased. Moreover after exposure to those high humidities, the loss of quality is permanent; it cannot be regained.

"The effect of humidity on paper breaks has not been made clear up to this point, and we can only say that we believe the adsorption of moisture by the paper from the air, or prevention of the loss of moisture makes the sheet more pliable, reduces its static electricity charge, and allows it to pass through the press without sticking to rollers and former apron, thus reducing the tension in the sheet."



Effect of humidity in relation to web breaks. Graph prepared by J. P. Grant, Paper Chemist, New York Times. *In it is recorded the data obtained over one year's period of time showing that the higher the humidity in the pressroom the fewer were the web breaks per 100 rolls. Mr. Grant concluded in his talk before the Toronto A.N.P.A. Mechanical Conference that as a result of this data it would appear little or nothing is to be gained by raising the humidity above 60% relative humidity.*



Inside view of Linotype vise, showing Lovett point adjustment or vernier attached to vise closing apparatus by means of which the operator can secure odd-point settings of the left-hand vise jaw.

B-77 DIST. SHIFTER CAM HINGE SCREW.
D-3013 ASSEM STAR SHAFT BUSHING.
D-2560 ASSEM SLIDE BELL HAMMER.
B-309 2ND ELEVATOR CAM ROLLER.

Sectional front view of Linotype left-hand vise jaw adjusting attachment devised by Machinist Lovett and described by John J. Shea, Production Manager of the Worcester (Mass.) Telegram-Gazette, *at the Toronto A.N.P.A. Mechanical Conference. By means of the device, the operator may set the left vise jaw to 24½ ems, then by means of the dial (vernier) he can adjust the jaw inwardly 2 points so the resultant measure will be 24 ems and 4 pts. when setting double-column matter for the paper which uses 4 pt. column rules.*

Ways to Reduce Newsprint Roll Widths

John J. Shea, Production Manager of the Worcester (Mass.) *Telegram* and *Gazette*, presented *Ways to Reduce Newsprint Roll Widths*, prepared by the Committee on General Subjects. After commenting upon the savings in newsprint to be made by using narrower newsprint roll widths and the swing to 4-pt. column rules, Mr. Shea described in detail the mechanical equipment changes necessary.

In part, he said:

"Regarding the mechanica lchanges, you understand that they will vary in different offices depending on equipment and the amount of savings sought. Some papers have reduced their roll sizes one inch, others one-and-one-half inches, and a few papers are down to a 66-inch roll.

"To cite an example of savings, a paper using 68 in. rolls and having a yearly consumption of 10,000 tons can, by reducing paper rolls to 67 in., save approximately 1½%, or at $48 per ton, approximately $7200 per year.

"The substitution of the 4-pt. for the 6-pt. column rule will reduce the form width 14 pts. per form, or 56 pts. across the 4-plate cylinder. This equals 7/9 in.

Composing Room Changes

"Chases will have to be altered somewhat. In most cases 14 pts. will have to be added to the side lockup bar. This strip can be welded permanently. It may also be necessary to shorten the foot-bar. This is easily done. On typesetting machines, when setting slugs 2-columns wide, 24 ems, 4 pts., several methods are used. A machine setting 2-column slugs is equipped with proper liners. If the machine is equipped with a Mohr saw and arranged for controlling the assembler and left-hand vise jaw, no problem exists. If not, one practice is to set the left-hand vise jaw 30 ems and put a gauge measuring 5 picas, 8 pts. on the vise jaw adjusting rod. This gauge is a simple arrangement and can be made by your machinist.

"Another practice is to move the left-hand jaw in 2 pts. and then set the jaws for 24 picas, 6 pts. You actually get a 24-picas, 4-pt. slug. This is the practice we follow on the *Worcester Telegram-Gazette*. Mr. Lovett, our machinist, has worked out a unique device for taking care of this adjustment.

"The parts used on standard equipped Linotypes for setting 24 ems and 4 pts. are all stock parts and include:

Assembler star shaft bushing	D-3013
Distributor shifter cam hinge screw	B-77
Assembler side bell hammer	D-2560
Second elevator cam roller	B-309

"The first operation was to remove the vise jaw wedge bracket assembly, part (E-581) and remove the vise jaw wedge adjusting bushing (E-582). A shoulder was turned on the outside edge of the bushing 5-16 in. wide by ¾ in. diam. Next, a second elevator cam roller (B-309) was cut so as to make two dials 3 in. diam. and 5-16 in. thick. A ¾ in. hole drilled through the center allows this dial to fit over the turned end of wedge bushing (E-582) and is fastened by a set screw.

"To eliminate the necessity of loosening and tightening the wedge bracket locking screw every time a change is made, the screw is left loose and the following addition made:

"Horizontally through the two flanges on left-hand vise jaw wedge bracket a ¼ in. hole was drilled. The hole in the top flange was tapped to take distributor cam hinge screw (B-77). An assembler star shaft bushing, cut in half, acts as filling pieces on either side of assembler slide bell hammer which was altered to make the indicator arm for the dial.

"A small spring fastened to this arm keeps it constantly bearing against the outside edge of the dial, very similar to the Mohr saw arrangement.

"Notches can be cut in the dial to give any odd measure or fractional point desired. If operator who has been setting single-column matter, wishes to set slugs 24 ems and 4 pts., he changes assembler slide and vise jaw to 24½ ems, and then turns the dial which is fastened to vise jaw bushing, in 2 points.

"The advantage in this arrangement is that there is no necessity of making any changes after installation. When operator is setting even or half-picas, the machine operates without using the dial. If other than even or half-picas are necessary, merely change the dial to notch which has previously been made to correspond with odd measures needed. While the dial at present is notched only for the 2-pt. difference required, it may be scaled so that any odd measure, other than the full-em and half-em setting, may be scaled.

Stereotype Department Changes

"Changes on the Juniors and Automatics are as follows: Drop cutting saw for shorter plate, secure new cutting saw

collar, patch matrix clips or put on new ones, file bolster strips, supply new pouring sheets, check location of saw with reference to groove in cylinder.

"Changes on Pony Autoplates are as follows: Reset plate stops, patch core-casting bars, file bolster strips, supply new pouring sheet, and check location of saw with reference to groove in core.

"The change on the Autoshaver is to reset the upper trimming tool.

"Changes on the Automatic Finishing and Cooling Machine are as follows: The barrel on this machine can be cut down on delivery end, permitting the cutter being moved in close enough to cut the desired plate width. The cutting of the barrel on this machine is not a difficult job. The cutter can be attached to the side frame of the machine and the barrel driven in its regular position. The rib in casting core should be checked.

"If, for the shorter measure plate the groove in the casting cylinder or core is in conflict with the length of plate required, these grooves in most cases can be filled in very easily, and if necessary a new groove cut in the cylinder or core by any competent machinist.

Mat Shrinkage

"With the experience gained in the past few years in handling mats and with the continual improvements in equipment in our Stereotype Departments, higher moisture content and greater shrinkage have become less of a problem.

"While some offices today are only getting 3/8 in. shrinkage, many offices are handling mats that shrink from 1/2 in. to 5/8 in. without any difficulty. It is estimated that 5/16 in. shrinkage is the averaga result. This is an important factor to consider as it applies very definitely to the amount of savings you may effect. Some mat makers are working towards 3/4 in. shrinkage.

Pressroom Changes

"Check positions of trolleys, nipping collars, dinkey page slitters, etc. See that formers can be brought close enough together on straight line machines, check collecting pins for both straight and collect runs. If spring plate lockup is used, adjust it. Check blanket bolsters. It may be necessary to beat down bolsters or change blankets.

"Another method of reducing newsprint roll widths involves the type of plate clip used on the press. Most of you know that the 60 deg. bevel and the 45 deg. bevel are generally used today. You also know that an undercut saw may be purchased from the casting machinery manufacturers that will undercut the beveled edges of a stereotype plate. The advantages gained are as follows: On a 60 deg. clip or center band, the advantage gained is very small, namely, 0.025 in. on each end or 0.050 in. on each plate. This difference makes it hardly worthwhile.

"There is a very decided advantage, however, in this type of cutter if your clips are of the 45 deg. bevel. On this type of plate, you can gain approximately 1/16 in. on each end or 1/8 in. on each plate or 1/4 in. across a four-plate cylinder.

"Other pressrooms have been able to re-cut the clips and bands on equipment, while still other pressrooms have found it necessary to buy from the press manufacturers new bands and clips. There is some danger in using an undercut saw on the full Automatic Machine. The rib being so deep (1/8 in.) together with the shoulder cut leaves harcly enough plate at the gripping surface.

Miscellaneous Subjects

Under this section of the program, John W. Park, Production Manager of the Chicago *Tribune*, was chairman, with Charles H. Ruth, Washington (D. C.) Evening *Star* Mechanical Superintendent, as Vice Chairman. The report on inventions developed in member offices prepared by Mr. Ruth's Committee on Miscellaneous Subjects, was deferred until another time. The printed reports, however, were distributed among the mechanical executives present.

All-Tone Plates

A. L. Lengel, Production Manager of the Oakland (Calif.) *Tribune*, was then introduced by the chairman. Mr. Lengel described what he calls his new All-tone Planographic Printing Plate method by means of which he prints direct from a zinc plate 0.027 in. thick strapped on the plate cylinder and in combination with stereotype plates on the rotary newspaper press. Patent has been applied for. The plates may consist of pictorial layouts or combination art and type matter.

According to Mr. Lengel, the All-tone Plate is not planographic in the same sense as an offset printing plate. The plate is mounted on a dummy steel plate that makes up the difference in plate thickness. The present plate is made of zinc 0.027 in. thick. The plate is fastened on the dummy plate by bending a flange at the head and tail and fastening them under a bar at the end of the dummy plate.

These All-tone plates are etched in the same manner as in photo-engraving except particular attention must be paid to the grain in the metal and the burning in of the etching powder so as to avoid making a brittle plate that will crack in forming on the dummy or possibly on the press. The process of making is simple after the body face screen is decided upon which may be 40-line while the illustrations may be 75-line screen and stripped into the body face film. The line drawing and text matter are secured in register and reverse on an opaque plate which is overprinted on the sensitized zinc, after the combination body face film carrying the illustrations has been printed. This gives sharp edges to the text and line drawing characters and does not detract from the screen values.

We are using zinc 24 in. in length and allowing salvage and work room on the sides of the plate about 1 in. on each side. The side salvage carries some of the body face screen and when trimmed to exact plate width leaves a clean perfect edge. The head and tail salvage is carried beyond the printing length of the plate so that when the flanges are made, the body face screen carries beyond the form roller or impression contacts with the plate, thus giving clean screen edges at these points.

Mr. Lengel asserts his method secures a plate that in printing lends its values to the economic uses of ink and paper while aiding in allaying to some extent penetration and offset effects; creates a plate that affords an offset lustre and rotogravure contrast while enhancing the fine details of letterpress; miscellaneous use with existing plates in any plant using the letterpress method, or provides (when the volume permits) a means for printing an entire section with All-tone planographic plates. Of course, there are no restrictions on good paper and ink.

View of All-tone Planographic Printing Plate. Etched on zinc 0.027 in. thick, the plate is fastened by means of flanges to the regular plate cylinder of a newspaper printing press. To equalize the plate thickness and bring it up to the same thickness as stereotype plates, a dummy plate or liner is interposed between the plate cylinder and the All-tone Planographic Plate.

Mr. Lengel said runs of 100,000 copies had been secured without difficulty and without nickling the think zinc plates. He thinks runs up to 300,000 can be made. The All-tone planographic plate is formed and fastened to the steel dummy before mounting on the press. To form the plate an inverted shaving crown is used. The flat plate is sprung into the crown and the dummy is placed in position. As is described above, the head and tail ends are bent over and fastened to the dummy.

View showing half-roll web, upon one side of which has been printed a pictorial feature by Lengel's All-tone Planographic Printing Plate. At the near-side is a regular stereotype plate, printing upon the same sheet.

Tuesday Afternoon

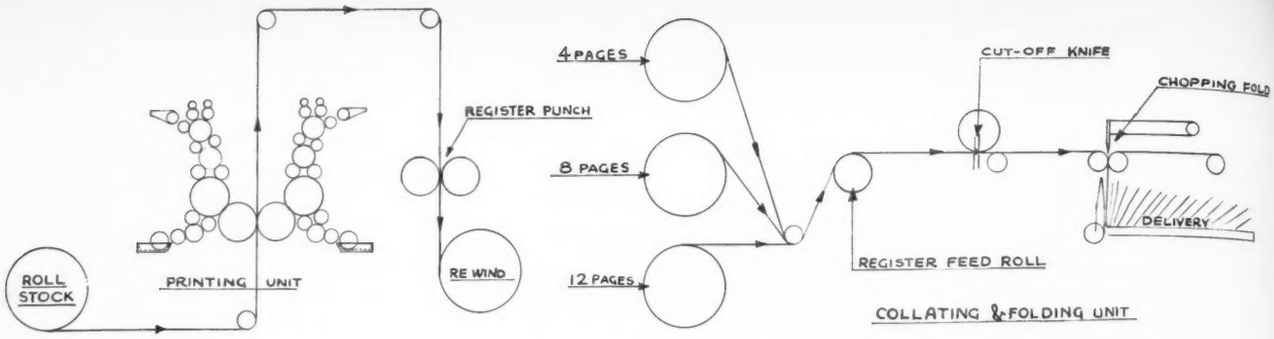
Small Newspaper Meeting

The second session in the history of the Mechanical Department for the benefit of the smaller daily mechanical executives was held Tuesday afternoon. The session was divided into three sections devoted to composing room management, photo-engraving plants and tubular press and stereotyping problems.

F. W. Schaub of the Decatur (Ill.) *Herald* and *Review*, presided. Russell B. Miller, Mechanical Superintendent of the Bloomington (Ill.) *Pantagraph* was Vice Chairman.

At the symposium on composing room management, Earl Anderson, Composing Room Superintendent, Consolidated News-

(*Continued on Page 28*)



Side elevation diagram showing plan of Webendorfer Offset Roll-Fed Tabloid Printing Press and Collating Machine. The press prints both sides of the sheet in one operation through the press (4 pages) at 10,000 cylinder revolutions per hour and rewinds the sheet.

In the right section of the diagram is shown the collating machine. Several rolls, upon which four-page sections have been printed, folded and trimmed to make a 4, 8, 12 or 16-page tabloid size paper. Notice register punch and cut-off knife in collater.

Equipment

Specially designed for the purpose and other equipment adapted from another field now being used by publishers of offset weekly newspapers.

By STAFF WRITER

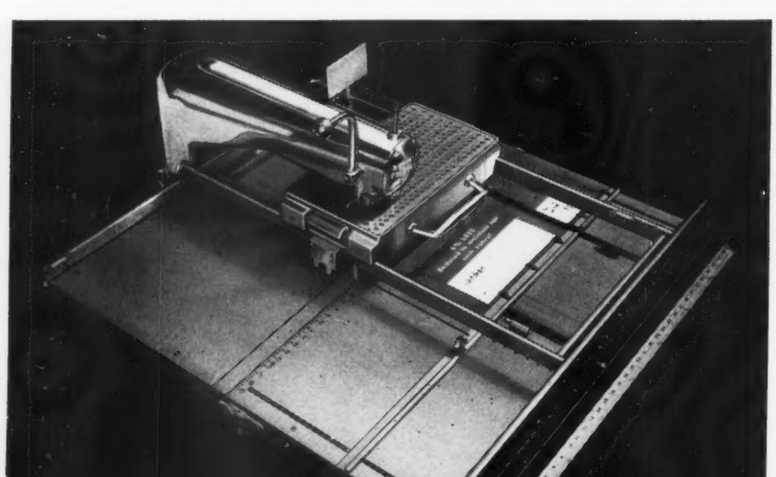
SOME time ago, it was announced that the offset process was being used to print weekly newspapers. Since that time, several other weekly and semi-weekly newspapers have installed offset plate-making and printing equipment for producing their publications. Among them are the Watertown (S. D.) *Reminder;* Worthington (Minn.) *Reminder;* Dunn County (Wis.) *Pictorial Messenger;* The Owatonna (Minn.) *Owatonnan;* Rock Springs (Wyo.) *Record*. Other installations have been reported previously in California, Indiana, New Jersey, and Texas.

Some of these papers are using the Printasign machine for display composition and the Vari-typer for straight-matter composition. Following shortly upon the adaptation of the Printasign for display work, the Webendorfer-Wills Co., Inc., Mt. Vernon, N. Y., has announced a new roll-fed offset press upon which may be printed four pages in one operation through the press or several four-page sections may be printed in roll-form and rewound. The printed rolls are then placed in a collating machine and collated into 4, 8, 12, 16 or more page tabloid-size papers.

One publisher of a weekly newspaper states that in addition to favorable production costs, he is enabled to take advantage of the "opportunity open to publishers in the weekly field by the use of pictures."

Printasign Machine

The Printasign machine which is being adapted to the composition of offset display lines and news headings, is not of recent origin. Its use has been confined to the department store field for printing sales signs and tickets. Its use in the offset field, however is new.

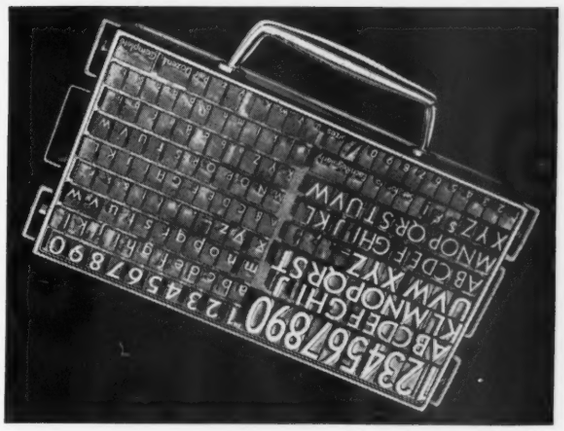


Perspective view of Printasign machine, used for some time for making department store signs—now adapted for offset display composition.

The machine can be furnished with type faces ranging in size from 24 pt. to 144 pt. It prints one letter at a time, the machine is arranged to space the letters differentially according to their set width automatically and without attention from the operator. The machine is not fitted with an equi-distant line device. Display composition (which operation really consists of selecting the characters and printing one character at a time with automatic inking) may be executed flush left or right after the stream-lined manner of type composition by letterpress printing or like standard office typewriter practice in which the lines are uneven at the right. By figuring the length before the printing operation, lines may be centered. Hanging indention is obtained by moving the type case to proper starting position, then using the word space device one or more times according to indention wanted.

The Printasign type case consists of a metal frame in which are supported the individual type characters. The type characters resemble the upper part of Ludlow-cast slugs without the shank. In the wider and larger characters the "type" is of body set-width. The letter characters are cast from type metal and are coated with copper by electrolysis. Each letter character is fused on a steel plunger. The plungers are mounted in the type case with spring assembly so that after the plunger has been depressed to print the character upon the paper or cardboard, the spring lifts the plunger to its normal position. From one to five fonts of type may be mounted in the type case, depending upon size, face selection, and whether the font is to consist of caps and lower case, all caps, or caps and figures. The type cases are interchangeable and may be substituted one for another at will. This is accomplished by lifting the case and setting another on the two case-supporting rails as is shown in the illustration.

To operate the machine, the paper or cardboard is laid on the bed plate of the Printasign machine against guide bars which also are provided with spring clips to hold the paper



Printasign type case. This case will hold up to five type fonts according to point size and whether fonts are to consist of caps and lower case, all caps or caps and figures. Type looks like Ludlow-cast slug without shank, fused to a plunger. Each type is copper coated.

in stationary position against the guides for the printing operation. The cardboard may be placed in any position on the bed.

The sliding guides are then moved to position the cardboard in place according to where the line is to be printed. The cardboard is not readjusted for line position until the line has been completed.

The actual printing operation commences when the operator moves the type case in position by means of the handle at the front elevation to print the first letter. The lever handle with ball hand-grasp in the head of the machine is pulled forward and downwardly by the operator. The action of pulling down the handle depresses a plunger which in turn moves down into a corresponding hole in the top plate of the type case to depress the plunger for printing the letter character upon the cardboard. When the plunger in the head of the machine enters the hole in the type case top plate the letter character is aligned with the other letters in the line. When the operator releases the lever in the machine head, the coardboard is moved to the left according to the set-width of the letter which has been printed. The amount of movement of the cardboard to the left is determined automatically by a detent depression adjacent to the plunger hole for each letter character in the type case. The detent itself is in the machine head. Operation of the machine is silent. Amount of pressure of the type character upon the paper is constant, being regulated by spring pressure only. Two composition rollers mounted underneath and traveling with the type case in all its movements keep the type characters in a constant inked condition.

Straight-Matter Composition

Straight-matter composition is executed by means of the Vari-typer, Composograph, Toman Marginal Aligner and other units which have been and are now being developed. Some of these have been described in *Printing* Equipment *Engineer* some time ago. Constant line length device is incorporated in the machines so all lines will be equi-distant. For some time, regular type faces have been obtainable on standard typewriters. The development of automatic self-spacing typewriters has progressed so that the typewritten sheet is taken from the machine with evenly justified lines.

On the Vari-typer, the type faces are carried on shuttles. The shuttle is easily removed and another substituted. Two type faces can be placed in the Vari-typer at one time. Changes from one of the two faces to the other is accomplished by twisting a plate-holder knob. When a key is depressed a small impact hammer prints the letter on the paper. This is controlled by an electro-mechanism. Manufacturer states the strength of impression is also controlled electro-mechanically. Horizontal spacing can be controlled, permitting a choice of any combination of three of 10, 12, 14, 16 or 18 characters per inch. Line spacing (number of lines per inch) can be controlled up to nine lines per inch.

Roll-Fed Offset Tabloid Press and Collater

One of the new developments in the offset-printed weekly newspaper field is a roll-fed press for lithographing multiple-page tabloid-size papers. Both sides of the sheet are printed in one operation through the press and rewound into rolls. The machine will deliver a 22¾ in. long sheet handling four pages at a time. The object is to make possible the printing of a weekly newspaper of 4, 8, 12, 16 or more pages. The four-page sections can be printed in advance of publication date from the roll and rewound into roll form. The rolls can then be put into a machine for collating the webs together and putting in one fold to give the tabloid size.

The press is designed to handle publications up to 10,000 circulation per edition. Both the press and collater are constructed to operate at a speed of 10,000 cylinder revolutions per hour.

John B. Webendorfer, Vice President of Webendorfer-Wills, Inc., states the collating idea was adapted to tabloid size newspapers from the design of salesbook presses which his firm built for a large concern doing this work.

To explain this idea, Mr. Webendorfer also states that in sales book printing and collating work, the white sheet is printed first and rewound in rolls. Then the pink, yellow and green sheets are printed in succession and likewise are rewound into roll form. The printed rolls of different colors are then put into a collating machine which collates them with interleaved carbon. As the roll stock is being lithographed, holes are punched along the edge for register purposes and slits cut with a slitter near what would be one margin of the sheet. After being collated, and one fold has been made, the slit section is automatically removed.

Credit Memo Plan

A PLAN whereby outmoded typesetting machinery may be disposed of by the owner to the Mergenthaler Linotype Company in exchange for negotiable certificates has been worked out by Joseph T. Mackey, president of the company. Copies of a booklet explaining the plan are being presented to all newspaper publishers and printing plant proprietors in the United States.

The plan makes it possible for the owners of outmoded typesetting machines to convert those machines at once into liquid values by means of credit memoranda to be issued by the Mergenthaler organization. The memoranda may be applied to purchases of new Linotypes or Linotype parts and supplies, or may be sold, as they are negotiable.

A Basic Problem

In the booklet published by the Mergenthaler Linotype Company the principal reason for inaugurating the Credit Memorandum Plan is as follows:

> For a time the general complaint against conditions in the Graphic Arts Industries was directed against "over-equipment." Is this true today? This is doubted, for the trade has since come to realize the wide difference between *over*-equipment (too many modern machines for the requirements of a given business) and the *surplus*-equipment (extra, idle machines, many years old, outmoded and generally unprofitable to operate). It is against this surplus equipment that this effort is now directed. . . . Without discounting the importance of other business problems, it is believed that the used printing equipment question is basic. It will be found at the root of many other vexing conditions.

Outline of Plan

In its application, this plan provides that (1) the owner of an old typesetting machine may sell it outright to the Mergenthaler Linotype Company. (2) In payment he receives a credit memorandum in the agreed amount. (3) The Mergenthaler Company removes the machine from his plant and scraps it. (4) The credit memorandum is good, during a period of five years thereafter, for ten per cent of the purchase price of new products of the company, including new Linotypes of current model, matrices, magazines, molds, liners, spacebands and all parts and supplies made by the company. (5) The credit memorandum is negotiable, wholly or in part. It may be broken up into smaller units of twenty-five dollars or more, and any or all of the units may be sold if the owner so desires.

"Our purpose," says Mr. Mackey, "is not to interfere with the right of owners to sell or deal with used machinery with whomsoever they may choose, nor is it the intent to interfere with dealers' legitimate rights in the purchase of any used machinery. There will naturally come upon the market from time to time a certain amount of used machinery that has real economic value, and our effort and aim are not directed toward that type of machinery but only toward machinery which by reason of being outmoded, obsolete and uneconomical, should properly go to the *scrap heap*.

"Other manufacturers are invited to follow the same sort of plan or to develop improvements on it. We are for the best plan that can be devised to serve the best interests of the industry."

The main idea of Mr. Mackey's plan dates back to the days of the N.R.A., when it was offered by him to the graphic arts equipment industry. Code authorities approved it as a forward-looking plan "to solve a situation which had a depressing effect on all capital-goods industry."

Kelly Press School

Another Kelly Press School under the auspices of American Type Founders was completed at the Cleveland branch on May 20 at which 218 pressmen had been guided through the five week's course by Instructor Jack Wealsh, who has previously conducted several Kelly Press courses in other cities. Splendid cooperation was given by Charles Hiss, business representative of Cleveland Pressmen and Assistants' Union No. 56.

Books Received

THIS business of furnishing etch, or reproduction, proofs has reached such proportions in the printing industry that it is well to have published a book upon the subject. This statement becomes factual when the writer states that 50% of the composition done by a well known typographic house is executed for reproduction purposes. Etch proofs should be perfect. How to produce them is discussed in the 40 page book just recently published by Frederick H. Bartz, Director, Graphic Arts Research Foundation.

The language used by the author is the language of the composing room. He discusses preparation of the form, suitable paper, ink, rollers and the technique of pulling good proofs. The principles of proof press construction and so on are made clear. One of the most interesting features of the book consists of 10 photomicrographs enlarged about X100 to show what happens when proofs are taken under the right and wrong conditions.

If you think you are now taking good etch or reproduction proofs, the writer believes you should secure a copy of *Etch Proofs*. If your proofs are good, the book will verify your opinion. If you are not getting good proofs, the book will tell you how to obtain them. In any event, purchase of the book will be more than justified. By following the instructions set down in *Etch Proofs* it will not be necessary for you to apologize for the unknown quantity in your proofs.

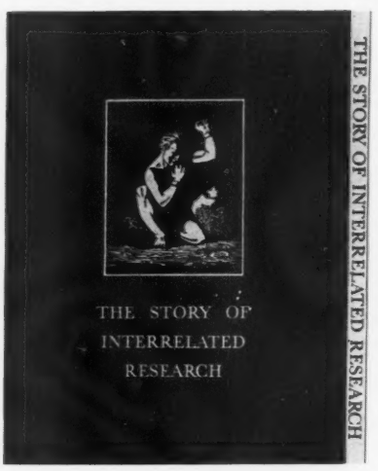
ETCH PROOFS—By Frederick H. Bartz, Director, Graphic Arts Research Foundation. Size, 6 in. by 8¾ in., paper cover, 40 pages. Two dollars per copy. Order direct from the publisher or through *Printing* EQUIPMENT *Engineer*.

Adds New Equipment

Clarence Seaman, Vice President of Imperial Type Metal Company, announces that the firm of Mr. and Mrs. Clarence Seaman has supplemented its present up-to-date equipment with a fine stream-lined daughter. Installation of the new equipment was made on June 21.

Interrelated Research

What is said to be a new approach to the problems of industry is described in *The Story of Interrelated Research*, a booklet published this month by Interchemical Corporation. The booklet tells of recent developments in printing, industrial finishing, textile coloring, and other industries, and shows how advances in one type of business may often be applied profitably to related fields. A fundamental research program is designed to investigate basic problems which affect several industries. The problem of speeding up the drying time of a chemical coating is cited as an example. Various fundamental Interchemical developments led to the introduction of Vaporin, a fast-drying process for printing on paper; Polymerin, a quick-setting industrial finish; and Aridye, a process and a material which speeds up and simplifies the printing of textiles.



Miniature reproduction of cover of The Story of Interrelated Research *with adaptation from the Rockwell Kent lithograph.*

The importance of long-range research activities with definite objectives, is stressed. Existing limitations may often be disregarded, it is pointed out, with these far-seeing aims ahead. The method of attack includes dividing the ideal objective into various elements, studying present products and processes, and developing the closest approximation of the ideal.

The booklet says that "where the products of a group of companies are related in character, there is an opportunity for coordinated research. This brings the experience and knowledge gained in one field to the solution of the problems of another. The organization of this interrelated approach and a basic method of establishing objectives are the distinguishing features of Interrelated Research."

Special laboratory divisions for the study of various projects are described. These activities are coordinated by a laboratory administration, and reports from individual sections are prepared so they will be clear and useful to other divisions.

PAR for Printers

JUNIOR EDITION

PRODUCTION Standards Corporation announces after conducting an exhaustive survey among printing plants in the United States and Canada, that there is a definite need for a smaller edition of *PAR For Printers*. Accordingly, the Junior Edition is now available.

The selection of the contents of the Junior Edition has been made especially for the smaller plant owner. It is the same as the Senior Edition, reviewed in a recent issue of *Printing* EQUIPMENT *Engineer*, except the contents have been confined to the operations and equipment most commonly found in the smaller plant with machines handling up to a maximum size of 22 in. by 28 in. The pages in the Junior Edition are identical.

The purpose of both Senior and Junior Editions of *PAR For Printers* is to enable management to protect production profits. Conscientious production and mechanical executives should have a standard by means of which it will be possible for them to supervise plant operation correctly. Since actual plant operations represent a great portion of total billings, either edition of *PAR For Printers* will enable executives to work in closer cooperation with management to produce work at lowest cost in order to protect profits—and that is the goal for which production executives should always strive.

PAR FOR PRINTERS—*Junior Edition*—Published by Production Standards Corporation, 737 North Michigan Ave., Chicago. Communicate directly with the publishers for lease rates.

The first meeting of the Southern California Mechanical Conference was held at the Knickerbocker Hotel, Hollywood, Calif., June 11 and 12. This picture was taken at the banquet held Saturday evening, June 11. L. L. McFall of the San Bernardino Sun *is president and S. J. Wills, of the Alhambra* Post-Advocate *is secretary. Before long, it is reported, the conference area will be expanded to take in 10 Western states.*

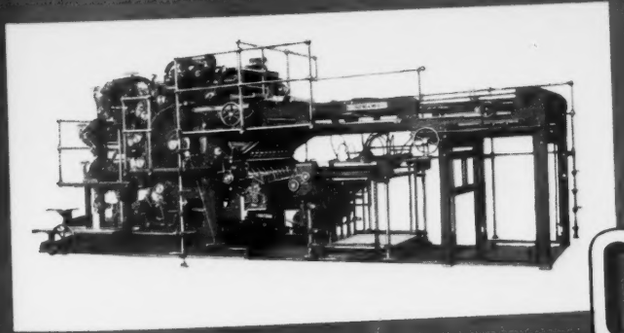
FIVE COLORS AT A TIME

Four-color process work—plus an additional color—on sheets up to 50 x 72 and at almost unbelievable speeds! That's what is being done today with Cottrell five-color rotary presses.

With all five colors printed in accurate register on a common impression cylinder, the 32 x 45 Cottrell press shown on this page, used by a leading color printer, can be operated at speeds up to 5000 sheets an hour. Larger sheets up to 50 x 72, either super or coated, can be run on Cottrell five-color presses at speeds up to 4500 sheets an hour.

These presses have many practical advantages, including adequate provision for the handling of bleed pages. All printing cylinders are mounted in one-piece side frames, and the construction throughout is rigid, heavy, and well-balanced, providing smooth operation and freedom from vibration at all speeds.

Other Cottrell presses for multi-color printing include various types and sizes of letterpress units, and rotogravure machines for printing four colors on one side of a web and two colors on the other side. Keep in touch with Cottrell developments in this field.



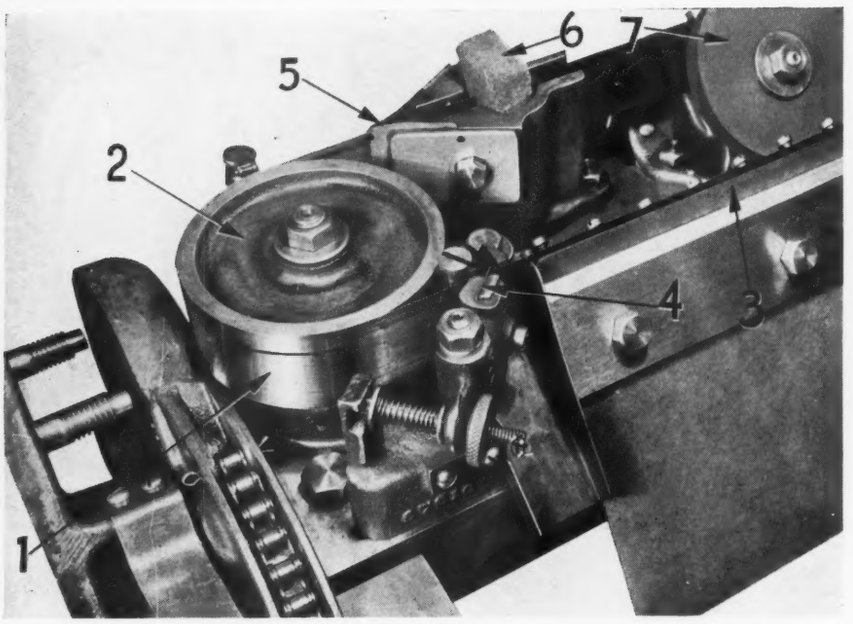
Typical Cottrell Five-Color Rotary Press

C. B. Cottrell & Sons Co., Westerly, R. I.

NEW YORK: 25 EAST 26th STREET • CHICAGO: 332 SOUTH MICHIGAN AVENUE • CLAYBOURN DIVISION: 5713 NORTH HUMBOLDT AVE., MILWAUKEE, WISCONSIN • SMYTH-HORNE, LTD., 1-3, BALDWINS PLACE, GRAY'S INN ROAD, LONDON, E. C. 1

COTTRELL

New Printing Equipment and Supplies Items



Perspective-sectional view of doctor blade mechanism for new Miehle sheet-fed gravure printing presses. At 1 is shown the blade itself which is made of Swedish blue steel 0.005 in. thick, 1½ in. wide and approx. 112 in. long for No. 44 press. The ends are welded together to form an endless belt which is mounted on two pulleys, one of which is shown at 2. Micarta apron which stops ink from flowing further on doctor blade and returns it to the ink reservoir is shown at 3. Scraper to remove ink from the blade after it has wiped the design cylinder is indicated at 4. Two scrapers, one for each side of the blade, are shown at 5. A kerosene soaked felt pad 6, lubricates the blade before it passes sharpening stone 7.

Doctor Blade of Novel Design

Announcement of the Miehle Models 57 and 44 sheet-fed gravure printing presses was made in the May issue of *Printing* Equipment *Engineer*. Mention was made of the new type doctor blade. A detailed description is presented here with diagrammatic and partial view of the doctor blade mechanism so some idea may be obtained as to how it operates.

The doctor blade itself is made from Swedish blue steel 0.005 in. thick 1½ in. wide and 112 in. long on the No. 44, and 136 in. long on the No. 57. The two ends are welded together to form an endless steel band or belt, after the fashion of a band-saw blade. The doctor blade is mounted on two pulleys each of which is stationed opposite the ends of the design cylinder. Provision is made for applying tension to the blade. Both doctor blade pulleys are driven by gears to eliminate blade slippage. As the blade or band begins to travel in one continuous direction at right angles to the direction of rotation of the design cylinder, the front edge wipes ink off the surface of the design cylinder. As it rotates, that portion of the doctor blade or band which has completed wiping the cylinder goes around to the back where it is automatically cleaned, sharpened, honed and cleaned before it returns to contact the cylinder etching.

The sharpening and honing stones can be adjusted through a wide range for sharpening the edge of the doctor blade or can be removed from contact with the blade. Wear is equally distributed over the entire length of the doctor blade irrespective of the nature of the etching or design layout because the blade travels in one direction and is being kept in a sharpened condition constantly.

Manufacturer states that due to the constant self-conditioning of the doctor blade while in operation, it is possible to keep the prints uniform and clean on long or short runs regardless of the depth of the etchings. Fuzz cannot gather on the edge of the blade.

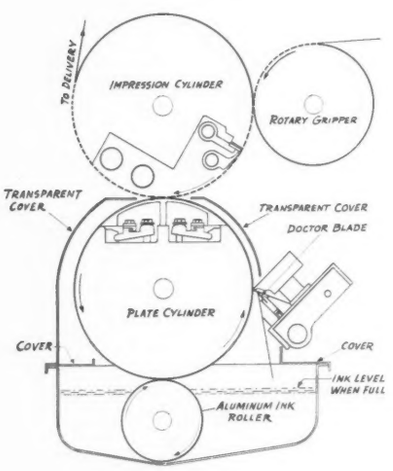


Diagram in cross-sectional view shows arrangement of the component parts of the Miehle sheet-fed gravure printing press. The aluminum roller in the fountain reservoir supplies ink to the design cylinder. The doctor blade mechanism is shown in the halftone illustration accompanying this article.

Paasche Flock Airbrush and Booths

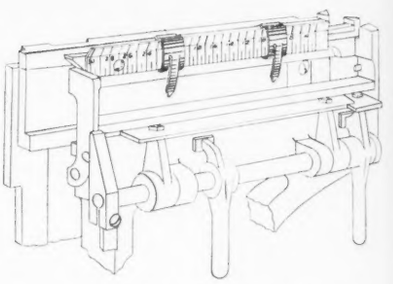
Flocking has been used to some extent in the printing industry by bookbinders and greeting card makers for securing a velour or suede-like surface. The method has many uses for art and display work and in other industries. Paasche Airbrush Company has announced an airbrush and booths especially for use in applying flock to sized surfaces. The air brush may be used also for applying the sizing or binder to the surface to be covered.

The booths are arranged in two sections, one of which is to be used for applying the binder or sizing. Flock is applied and reclaimed in the other section. Booths are made of 22 gauge steel panels electrically welded. A special removable curtain is provided at the front of the flock section of the cabinet. Excess flock drops from a collector screen into a collector pan where it may be reclaimed for immediate reuse.

Food Ad Work Simplified

An assembling elevator em scale indicator has been developed by Intertype Corporation. It is claimed the indicators are easily attached to the machine and are easy to use. They are set to point to the center of words or groups of characters in a line of composition, so that other words or characters in a subsequent line or lines can be located under the same points.

A set of two indicators is accompanied by four washers, the latter being used to establish sufficient space between the em scale and the assembling elevator gate for unhampered movement of the indicators of the em scale. The scale screws pass through the washers. The indicators may be attached to any standard Intertype em scale by unscrewing the scale and placing them in position.



Intertype assembling elevator em scale indicator

Em scale indicators are furnished on Model G Intertypes as standard equipment. They can be applied to other line composing machines where the Intertype assembling elevator em scale is used.

Spirit Printing Colors

A new basic color developed particularly for spirit printing is announced by the du Pont Company Dyestuffs Division. Designated as Du Pont Auramine SP Concentrated, it is designed for use where the straight basic colors are employed in preference to the "Rotalin" colors for spirit printing, and where fastness to water bleeding is not a factor. The new color is equal in strength and shade to Du Pont Auramine Concentrated, but is much more soluble in alcohol.

Another addition to the current range of du Pont spirit printing colors is also introduced in the announcement of "Rotalin" Red B Extra Concentrated. It was developed in response to a demand for a bluer shade of red for spirit printing. The new color produces a shade of red similar to that obtained with Du Pont Rhodamine B Extra, and is considerably bluer than "Rotalin" Brilliant Red B and "Rotalin" Red Y. It is similar in properties to the other "Rotalin" colors and may be handled in the same manner in the preparation of spirit printing inks.

(*Continued on Page 34*)

MR. SUPERINTENDENT

Have you seen copies of Champion's new series of printed advertising pieces? They are examples of good printing and attractive layouts that will interest you. They demonstrate the printability of Champion papers. The Champion Satin Refold Enamel and Lexicon English Finish folders are available from your local Champion paper merchant. Ask for them!

• • • • • •

THE CHAMPION PAPER AND FIBRE COMPANY . . . Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Coated and Uncoated Advertisers' and Publishers' Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . . Over 1,500,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI

Gravure

Now printed in Germany, one-color sheet-fed, at 7000 sheets per hour—Reel-fed machines follow newspaper rotary design.

By HANNS FRITZ

IN the last twenty years rotogravure printing has undergone a very turbulent development. The question as to the reasons for such development may be found in the beauty of rotogravure printing and its cheapness of production. The variety of halftones in one-color rotogravure is surpassingly true. The reason for this characteristic of rotogravure printing is to be found in its peculiar technique. In rotogravure printing the ink is distributed on printing elements of the same size as letterpress or offset, but of different tone. Halftones in rotogravure are produced by the different depths of the numerous tiny interstices which serve to retain the ink before it is taken up from the etched surface of the cylinder. The possibility of using less substantial colors allows the use of paper of great roughness, provided it has a certain softness of material.

If the sheet-fed rotogravure machine is not yet so much in favor in Germany today as the reel-fed machine, it is to be accounted for by the fact that only a few years ago sheet-fed machines were built which reached a speed of up to 7000 sheets and so come up to the speed of offset presses. Because of its one-color printing effect, one need not be surprised at the quick spread of rotogravure, especially in a time where the photo predominates in commercial and in magazine printing.

There are various important offices in Germany where multi-color and sheet-fed rotogravure is cultivated. The reproductions of the old master painters and the high quality commercial jobs in rotogravure give testimony of the diligence with which the work is being done there.

Simultaneously with the one-color rotogravure printing from the reel and keeping pace with it is the development in Germany of multi-color reel-fed rotogravure printing. Plants such as the "Rotophot," Berlin, and the "Verlag Deutscher Verbrauchergenossenschaften" in Hamburg are good examples. Circulations of up to 1,250,000 four-color jobs are being printed here regularly. These figures may appear low as compared to American production, yet they represent a relatively high accomplishment when one considers the limited extension of the German market and population.

The last constructions of German reel-fed rotogravure machines show the same general layout as the modern high-speed newspaper rotaries: reel stands in a subterranean room, automatic drive and braking of the reel by means of a rubber belt or by a penumatic brake. The substructures are normally welded constructions, the reels are as a rule lodged in reel stars with three bearings which may be turned electrically or shifted sideways. The drive is likewise placed underground, the motor operating either direct over a length shaft or by means of double helical gearings. From the length shaft, gearings lead off into the printing units and the folders.

Nearly all German printing machine makers use today the elastic intermediate roller between the copper cylinder and the pressure roller.

Special care is being paid to the tight closing up of the ink ducts and the picture cylinders. The ink in many cases is transported into the ink ducts from a common ink tank and an ink pump is provided for constant mixing of the ink. Drying of the printed sheets is accomplished by means of different systems employing cold and warm air or heated drums; indirect heating by steam is preferred to electrical heating. Great care is likewise given to the closing up of all web paths for recuperation of the ink and the preservation of the pressroom from noxious vapors. Such closing up, however, does not prevent watching the printing operation through a window and facilities for feeding in the paper.

In the folders, cooled formers are used to prevent set-off of the color. Preferably one uses the jaw fold and wire stitching where required. The printed copies are delivered one by one on traveling belts, or by conveyors in the case of wire stitching.

If the German reel-fed rotogravure machines have been brought to a state of perfection in the last few years, meanwhile conforming to the printing material available such as paper and ink, it is also true that considerable progress has been made in the construction of sheet-fed rotogravure machines. As has been mentioned, sheets of fair average size are being printed at speeds of 7000 p.h.

The modern stream pile feeders make it possible to feed the sheets with dead register. Swing grippers bring the sheets to the impression cylinder at the same speed as printing and impression cylinder, the ratio of which is ordinarily 1:1. The printed sheets are delivered by chain gripper systems which lead the sheet over drying devices to the pile delivery table. Sheet-braking devices deposit the sheet in a simple manner on the adjustable and automatically lowering pile table.

Adequate progress can also be registered with regard to the construction of multi-color sheet-fed rotogravure machines. One of the most interesting among these is the *Egli* machine, a printed example of which is found in this issue of *Printing* EQUIPMENT *Engineer*. With this machine it is possible to print four colors on one side of the sheet and one color on the opposite side in one operation. It produces practically 9000 single prints p.h. or 1800 sheets in five colors at dead register with one feeding of the sheet. Briefly, the working method of the machine is as follows:

The sheet fed by the automatic feeder is, by means of a swing drum, transported to the first printing cylinder to receive the yellow print. Passing over a drying device, the sheet is transmitted to a big impression cylinder which is equipped with four gripper systems. Around this big impression cylinder are arranged three other printing units for red, blue and black. During three successive revolutions of the cylinder the sheet successively receives the impression of these three colors, each color being dried separately in the meantime. After the third revolution, the sheet which is now printed in four colors on one side, is released by the gripper system which up to the present has held it immovably. The sheet being released, it now passes over a drying and turning drum to the verso (opposite side) printing unit. After the opposite side of the sheet has been printed and dried, it is conducted to the delivery. The press is equipped with two-pile delivery tables on top of which are arranged the chain gripper systems. On one of the tables the sheets are deposited with the four-color side upwards and on the other with the one-color side upwards. When first starting to print, the pressman can control the impression from both sides of the sheet. The solid design of the machine makes it possible to print the heaviest forms on very rough paper. The machine, manufacturer states, is fit for high class printing without excluding its use for long runs of other jobs.

Employment Service

Employers, production and mechanical executives may insert notices in this department.

Items for this department may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing* EQUIPMENT *Engineer*, 1276 West Third St., Cleveland, O.

EXECUTIVE WANTED—Opportunity for young man with academic technical training in printing, plant management and practical experience in a combined commercial and periodical publishing house. Position open for a competent plant manager. Reply Box 53.

PRESSROOM FOREMAN—Color and black printing, 18 years experience. Desires either small daily foremanship or circular plant. Reply Box 52.

NEW PHOTO-ENGRAVING MACHINE—Substantial concern wanted for production and marketing of new implement for engraving standard copper and zinc plates, size 11 in. by 17 in. Operation without powdering method and by speedy process permitting loading of 1, 2, 3, 4 or 6 plates for single period. Parties capable taking this proposition must show sound financial backing. Reply Box 54.

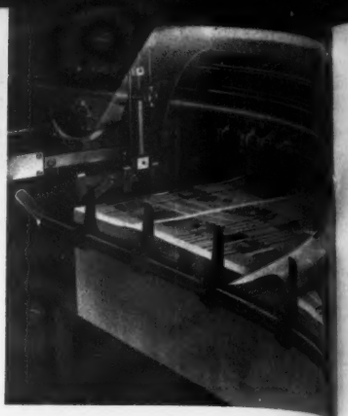
Four colours recto and one colour verso printed in one operation on

KOENIG & BAUER

EGLI

Sheet fed Rotogravure Press

for four colours recto and one colour verso in one operation

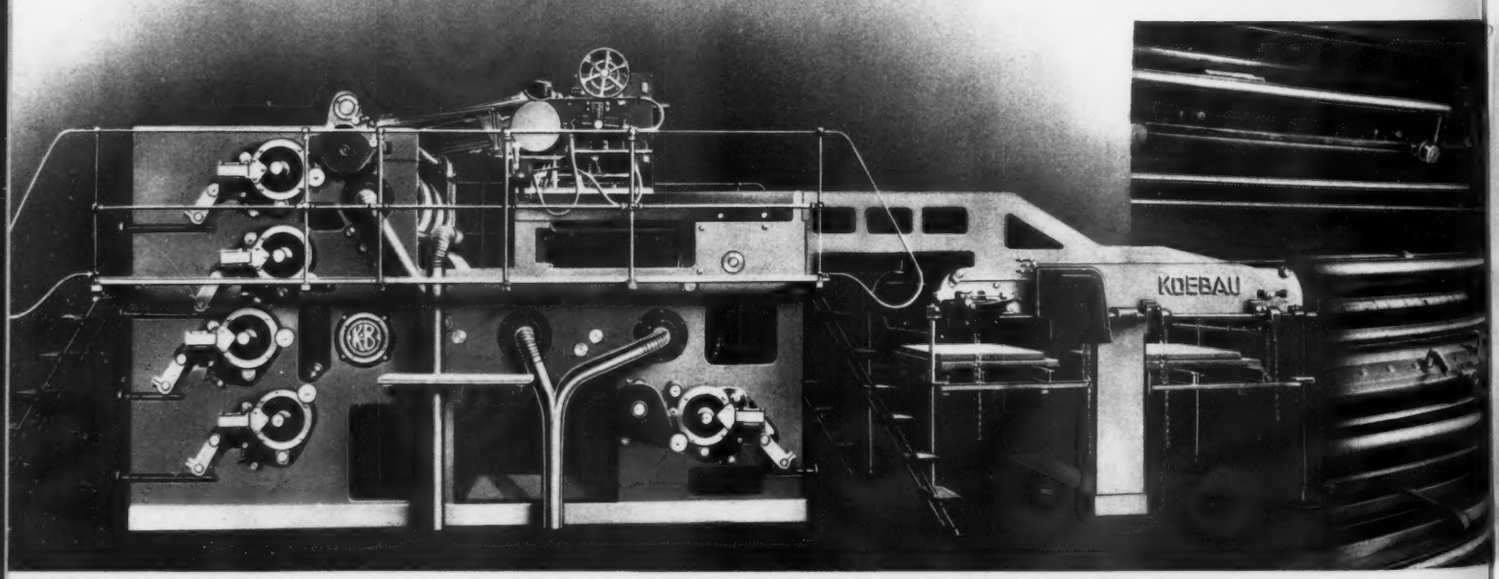


This photogravure machine for printing large sheets is for the printing of sheets which are to receive a four-colour impression on the one side and perfecting on the reverse, all in one operation. The method of working is as follows: The sheet coming from the feed board is taken up by a rotating set of grippers and passed on to the first impression cylinder. Whilst passing round this cylinder it is given its first impression (generally yellow) by the opposite etched cylinder. After two revolutions of the impression cylinder the sheet is taken up by a transfer system of grippers, on which the colour dries, and is then passed on to the second impression cylinder. This cylinder has four printing surfaces, one of which takes up the yellow printed sheet as soon as it arrives; during the first revolution of this cylinder the second colour (red) is printed by the second etched cylinder, during the second revolution the third colour (blue) by the third etched cylinder and during the third revolution the fourth colour (black) by the fourth etched cylinder.

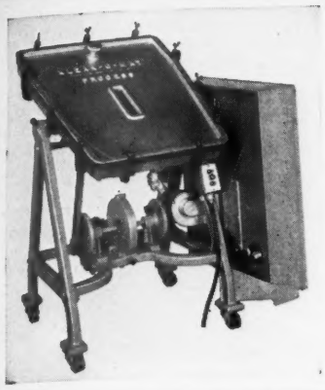
During this printing process the etched cylinders are controlled in such a manner as to allow only one etched cylinder i. e. the one with the desired colour, to touch the printing cylinder, the others being raised. The sheet is kept firmly in the same position by a set of grippers, thus guaranteeing dead register of the four colours. The other printing surfaces of the big impression cylinder are in the meantime also covered with sheets and are subjected to the same printing process, the prints constantly passing a drying contrivance. After two ¾ revolutions of the big impression cylinder one sheet is ready to be passed on to two drying and transfer drums. The sheet thus being printed on one side in four colours is now conducted to the delivery table over these drums and a set of chain grippers. If perfecting is required, the sheet is passed from the second drum to the perfecting cylinder, which works together with the fifth etched cylinder, and after perfecting is given back to a second set of grippers belonging to the second drum. Delivery is effected either on one delivery table or on two tables alternately, to allow both recto print and perfecting to be conrolled at the same time.

The forme cylinders, which inside are conically bored out, consist of silumin or brass tubes with ribs and can be pushed on to a conical core after the one bearing bracket has been turned on its hinges to clear the opening in the side frame. The cylinder journals run in roller bearings of ample dimensions. The great advantage offered by this machine is that the four-colour impression can immediately be compared with the original, further that the sheet, printed on both sides, can at once be passed on to the bookbinding department without having to pass through another printing machine.

The four colour recto and the one colour perfecting of the annexed leaflet was produced by feeding the sheet only once into the machine. — Size of Paper 30×44 inches.



Four colours recto and one colour verso printed in one operation on



KLEAN-O-MAT *progress!*

Month after month the number of newspaper and printing plants installing the Klean-O-Mat process to keep their line-casting machines in peak condition at minimum cost, continues to grow. Since the June A.N.P.A Mechanical Conference the Klean-O-Mat has been installed in still more plants, including:

Cleveland Press, Cleveland, O. — Government Printing Office, Manila, P. I.—Two orders to Switzerland.

KLEAN-O-MAT CORPORATION

30 Rockefeller Plaza **New York City, U. S. A.**

Intertype Notes

Neal Dow Becker, president of Intertype Corporation, sailed for Europe June 15 on his annual visit among Intertype's subsidiary companies and sales representatives. Mr. Becker's headquarters while abroad will be at Intertype Limited, Slough, Bucks, England, a suburb of London. He will spend considerable time visiting the company's agents in England, France, Germany, Czechoslovakia, and other countries. He expects to return to New York about October 1.

The board of directors of Intertype Corporation called for redemption on July 1 all of its outstanding 8% first preferred stock at $120 a share, the price specified in its certificate of incorporation. "The retirement of this stock at this time," said President Becker, "has been made convenient by the fact that the Corporation is issuing a million dollars of 10-year debentures at 3¾% interest to be amortized beginning with the sixth year. It has been considered advisable to take advantage of the economy and the saving of taxes which can be effected by paying off the preferred stock at this time."

June SYK Cover

The cover of the June *Share Your Knowledge Review*, official publication of the International Association of Printing House Craftsmen, Inc., was designed and lithographed by the Forbes Lithograph Co. of Boston. The cover features the Nineteenth Annual convention which will be held in Boston, August 14, 15, 16 and 17, in conjunction with the commemoration of the 300th anniversary of the introduction of printing into America.

Additional Hoe Equipment

The first step in its modernization program was realized when the Milwaukee *Journal* commenced operating its Hoe Super-Production Color Press recently. Continuing the modernization program, installation of the new battery of 18 Hoe Super-Production Anti-Friction Bearing Arched-type Units is in progress. These units will be fed from 18 new Hoe three-arm paper roll reels, with electrically-controlled full automatic tensions and Hoe full-speed pasters. The first six of these units are now being erected. When the other twelve are completed and installed, the Milwaukee *Journal* will be one of the most modernly equipped plants in the Middle West. The new presses will handle unit-to-unit run-of-paper color work. All of the *Journal's* new Hoe printing units are specially designed.

EDES
IS
READY
When a big news story break sends demand for zinc soaring, depend on Edes to supply your needs. Strategically located warehouses, with adequate stocks on hand at all times, are prepared to take care of abnormal demands. And there is little fear of over-taxing the Edes plant, because it has the capacity to supply all the photo-engraving zinc in the U. S. So you can depend on Edes Superfine Quality Zinc to be consistently uniform, because the processing and finishing are never hurried.
EDES
SUPERFINE QUALITY
ZINC
USE EDES HARD MATRIX ZINC FOR MATRIX WORK.
THE EDES MANUFACTURING CO., PLYMOUTH, MASS., U. S. A.
HEADQUARTERS FOR SUPERIOR BRAND COPPER AND PLYMOUTH BRAND BRASS
SALES REPRESENTATIVES
Chemco Photoproducts Co.....25-27 S. Market St., Chicago
Chemco Photoproducts Co.....Queen and Crescent Building, New Orleans, La.
Allan B. Croke Co.....163 Oliver Street, Boston
G. C. Dom Supply Co.....125 East Pearl Street, Cincinnati
Mid-West Photo-Engravers Supply Co..514 North Third St., St. Louis
E. H. Walker Supply Company..1315 14th St., N.W., Washington, D. C.
Selby Mohr.....883 Mission Street, San Francisco
Metzger Photo Supply Co.....1091 South Main Street, Akron
C. S. Illingworth.....49 Springville Ave., Buffalo, N. Y.
Thompson-Hayward Chemical Co.....909 2nd St. So., Minneapolis
Thompson-Hayward Chemical Co.....2228 Blake Street, Denver
GRAF ZEPPELIN IN FLAMES — ACME NEWSPICTURES

Conference

(*Continued from Page 19*)

papers, Rockford, Ill., spoke on *Modern Machine Composition. Small Newspaper Composing Rooms* was discussed by Louis G. Buisch, *Tribune*, Hornell, N. Y. Frank J. Salmon, Mechanical Superintendent, Grand Rapids (Mich.) *Herald*, discussed *Housecleaning a Small Newspaper Composing Room*. Ben F. Davidson, Superintendent, Dubuque (Ia.) *Telegraph-Herald*, spoke on *A Small Newspaper Dispatch Room*.

Earl Anderson, Composing Room Superintendent of the Rockford (Ill.) Consolidated Newspapers, related that after investigation, it was apparent that an exclusive display machine in the size of his plant of 15 machines was out of the question. What was needed was equipment on which could be handled peak loads of display, ad text and at the same time be available for news or want ads when needed. He related how the machines were adapted to food and drug ad composition. He praised the automatic quadder and machine saw.

"One year's use of the new composing room equipment," said Mr. Anderson, "has proved by results that the finding of our studies is correct. Although our volume of advertising has been lower than during the previous year and the wages throughout the entire composing room have been increased 7%, we have shown a saving in our column cost."

The last topic on the Small Newspaper Session was *Tubular Press and Stereotyping Problems*, which was discussed by R. W. Angell, Foreman, Ithaca (N. Y.) *Journal*.

Rotogravure Meeting

Running concurrently with the Small Newspaper meeting was the Rotogravure Session. Production Manager Herbert Stanger of the *Christian Science Monitor*, Boston, Mass., was chairman, while Len S. Pinover of the Intaglio Service Corporation, served as vice chairman. Variations in reproduction of copy, color roto, copy requirements and a number of other topics related to gravure were discussed.

Small Engraving Plant

My Experience with a Small Engraving Plant was given by F. A. Lee of the *Daily Star*, Oneonta, N. Y. Milton R. Miller, General Manager, Batavia (N. Y.) *Daily News*, also reported on his small engraving plant. After starting with small equipment, Mr. Lee said it became necessary to add to the equipment.

The H-M Process

Mr. Miller gave a 100% recommendation and description of the one-man *H-M Process of Photo-engraving*.

He said, in part: "Our plant was installed November 30, 1937. We made our first cut that day, and have made cuts every day since, and used them. Charles E. Meulendyke and Ralph H. Hurst of Rochester, N. Y., are inventors of the H-M process. Mr. Meulendyke is a chemist, a graduate of Massachusetts Institute of Technology, and was for years employed by the Eastman Kodak Company. Mr. Hurst is connected with the Hurst Engraving Company of Rochester."

Mr. Miller said the new method is more a photographic than it is an engraving process.

"In a vertically mounted bellows camera the print to be copied is photographed through a 70-line film screen (cost 90c) on to a regular process film—not plate. This film, which becomes the dot negative, is then developed as a regular photographic film, fixed and dried. For our printing plate we use a copper plate, nickel plated, which has been sensitized. The dot film is then placed on top of a plate (no stripping) in a printing frame and exposed to light for three minutes. The plate is developed like a negative, fixed and hardened. The plate is then immersed in a small enamel tray of etching solution, gently brushed with a camel's hair brush for ten minutes, then turned upside down and left in the solution for 20 minutes more. The emulsion is then scrubbed off and the plate is ready to use. Only 1 bite. The process takes 90 minutes, but of course plates can be strung along in a row and one will be finished every 15 minutes or so."

Wednesday Morning

Stereotype Session

Arthur H. Burns, Mechanical Superintendent of the New York *Herald-Tribune*, presided over the Stereotype Session. W. B. Astor, Jr., Stereotype Superintendent of the Memphis *Commercial-Appeal*, was Vice Chairman.

Some Properties of Dry Mats

Dr. A. W. Schorger, President of Burgess Cellulose Co., discussed *Some Properties of Dry Mats*. He analyzed the qualities which should be incorporated in dry mats; and the present limitations of the product.

Speaking of the effect on shrinkage of the amount of moisture present in a dry mat, Dr. Schorger said, in part:

"This brings us to a consideration of the effect on shrinkage of the amount of moisture present in a dry mat. Dry mats seldom contain more than 20 to 25% of moisture since these percentages are at or near the fiber saturation point and with these amounts of water they give the maximum shrinkages attainable. To add additional moisture contributes little if anything to shrinkage and merely prolongs the time of drying. When a mat is soaked in water so as to take up 40% to 50% of water, we have the 'mushy' state characteristic of so-called plastic mats."

The mat manufacturers, stated Dr. Schorger, are anxious to assist publishers in their shrinkage problems, but that where excessive shrinkage is demanded the individual newspaper must travel at its own risk. The molded mat shrinks differently from the unmolded. Molding increases the shrinkage crosswise and reduces it lengthwise. With high percentages of moisture, around 20%, it is advisable to use a hard molding cushion. A soft cushion may cause fracture and distortion, thereby reducing shrinkage. Concluding his address, Dr. Schorger said:

"The manufacturer furnishes a mat that with a given moisture content will give a certain shrinkage under definite conditions of operation. More than this could hardly be expected. It is a common observation that mats from the same package will behave differently in various plants. It is obvious that we are here confronted with a situation where the operating conditions are not the same. As long as the human element predominates so largely in manipulation, the handling of mats will not become standardized. This, in reality is a healthy situation, since progress cannot be made by adhering constantly to a routine procedure."

Stereo Plate Hardness

A paper entitled *Effect of Cooling on Hardness and Grain Structure of Stereotype Plates*, by Production Manager Lester Yeager of the Indianapolis *Star*, showed meticulous study of the subject. His carefully prepared paper was well received. Mr. Yeager stated he had studied the cooling problem for the past three years and that he found such interesting and remarkable changes taking place during the cooling process that he enlisted the aid of Prof. H. Vance White of the Department of Metallurgy at Virginia Polytechnic Institute a little over a year ago. Together they made an investigation of the effect of cooling on the hardness and grain structure of stereo plates.

Pointing to advances which have been made in newspaper printing equipment, both in the stereotype and pressrooms, he said the one thing that has changed the least is the strength and wearing quality of stereo plates.

Microscopic study of plate sections were made, and tin and antimony particles were computed for each cooling rate. He exhibited microphotographs. Mr. Yeager stated: "The work which Professor White and myself have done on this problem seems to leave little doubt that better plates can be obtained by casting with the core as cold as possible and the outer part of the casting box warm enough to prevent the mat from chilling or causing metal shrinks or chilled plates. That method can be applied equally to many types of casting equipment while some equipment does not lend itself so easily. There will be problems more or less of a local nature that will require individual attention."

Molding and Molding Blankets

The next topic, *Molding and Molding Blankets*, it was announced by the chairman, would be discussed by W. F. Grenier, Sales Manager of the New England Newspaper Supply Company. Mr. Grenier asserted any expression he was about to give would be entirely his own personal opinion and would not be the opinion of an expert.

Continuing, Mr. Grenier said in part:

"In my opinion, the most important thing in stereotyping, for producing a plate that will in turn produce good printing, is the molding operation, because starting from that point is where the change takes place from the original to the copy in the form of a mold. The development of the so-called dry cork molder was not an easy matter. I made thirty-one experiments before reaching what was accepted to be the best for all-around purposes. Inasmuch as the Goss, Hoe, Scott and Duplex Molding Machines will produce a different characteristic in the mat and also there is a variation in the various dry mats on the market, and instead of trying to develop one cork molder and let it go at that, we experimented with a mixture of cork that would give basically the same condition in one mat as in another.

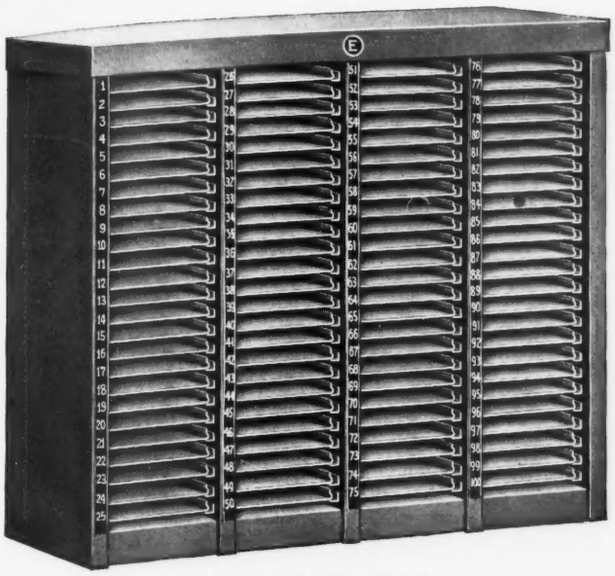
"Of course, when pressure is applied while molding dry mats, the natural thing is for the cork molder to absorb moisture from the mat. In that way, sometimes the molder has the appearance of being soft. If these corks are put where there is sufficient heat to dry them out and left to stand and cool, they will recover their density to some extent.

"I have been asked from time to time whether it is advisable to rotate cork blankets. I do not believe it is advisable or necessary to make individual rotations, because any well-made cork molder will stand at least ten or twelve consecutive forms. However, care should be taken when rotating, because while two cigarettes look alike, they don't taste alike, and you are liable to get a variation in your mat, but that I leave to the stereotyper.

"Some fifteen or seventeen years ago, we experimented with steel as a molding board, but found that it had a tendency to draw the impression from the mat after leaving the roller at the contact point. While we found some virtue in the steel, we found no way to overcome this characteristic. We then went to zinc, and found it to be ideal as a molding board, but it had a tendency to curl up and become cumbersome to handle. We still kept experimenting with different kinds and makes of paper board, always trying to keep in mind the characteristics of the zinc, until finally we hit upon the XXX Fibre Board, now in general use."

(*Contined on Page 30*)

GALLEY CABINETS



(Above) No. 13540 Galley Cabinet

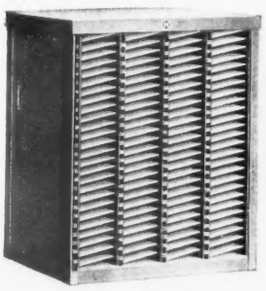
Here they are . . . three typical Hamilton Galley Cabinets. Strong, sturdy, cabinets with heavy 1/8" angle iron runs that never wear out.

The No. 13540 cabinet, shown above, holds 100 galleys, 8¾ x 13".

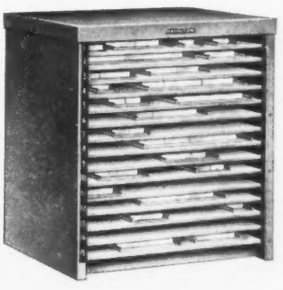
For those who prefer to store galleys on sloping shelves . . . we recommend the No. 13520, below.

And for combining galley storage with a correction or assembling table surface, use the Hamilton No. 13561 Flat Shelf Galley Cabinet.

There are other galley cabinets in the Hamilton line . . . efficient, well-built cabinets for every need. Send in the coupon for more information.



The No. 13520
Galley Cabinet



The No. 13561
Flat Shelf Galley Cabinet

HAMILTON MFG. CO. Two Rivers, Wis.

Please send full information on Hamilton Galley Cabinets.

Firm:.....

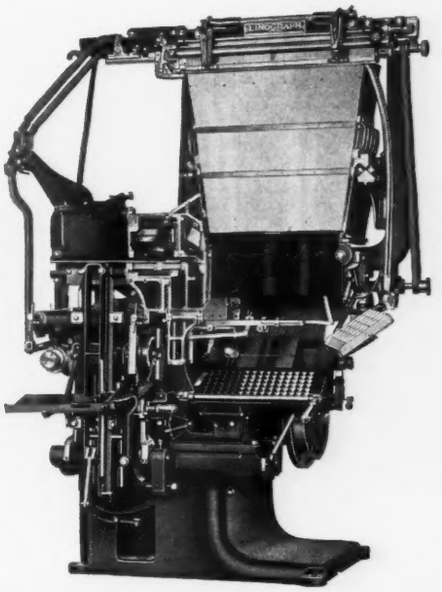
Name:.....

Address:.....

City & State:.....

ANNOUNCING

the Great New LINOGRAPH "50"



They are all talking about the new Linograph "50" since its initial showing at the ANPA Mechanical Conference in Toronto. Easily the outstanding new equipment offering of 1938, the Linograph "50" commands favor because it is New, Different, Better. The many advanced features combine to impress operator, machinist and owner alike. Send for complete descriptive catalog TODAY and get acquainted with the most flexible combination machine ever offered. A new high in quality at a new low in price.

Handles Standard Matrices.

●

Broader Range of Type Faces from regular magazine than any other machine.

●

Speedier, Quieter, Smoother than Anything you've seen.

●

Packed Full of New and Impressive Features—Each Practical and Proven.

●

The Machine You'll Choose for your Next Buy.

●

LINOGRAPH CORPORATION
DAVENPORT, IOWA

WRITE TODAY *for this* FREE BOOK

LINOGRAPH CORP'N
Davenport - - - - - Iowa

Gentlemen: Please send us your Linograph "50" Catalog.

Name .....

By .....

City .....State.....

Wednesday Afternoon

Pressroom Session

Walter Ogden, Pressroom Superintendent of the Cleveland *Press*, officiated as chairman of the Pressroom Meeting. R. A. Cooke, Pressroom Superintendent, Richmond (Va.) *News-Leader*, acted as Vice Chairman.

Handling and Conservation of Newsprint

Supplementing Impression Pete's report of the Wednesday afternoon meeting, we are printing some abstracted material taken from *Handling and Conservation of Newsprint*, a paper delivered by T. A. Corcoran, Purchasing Agent, Louisville (Ky.) *Courier-Journal*. Mr. Corcoran presented an exhaustive statistical report on waste conservation and newsprint handling which was compiled from questionnaires received from approximately 60 newspapers. He wrote particularly to the high and low papers in each classification of waste and in each of the four tonnage groups.

Mechanical Bulletin No. 177 was used as a basis for the original study of waste reduction savings upon which he reported at the Toronto meeting, Mr. Lowe mentioned the vast differences between the low and high papers in each classification as reported to the A.N.P.A.

Some of the figures reported by Mr. Corcoran from the questionnaires received by him are as follows:

"We have referred to the great difference between the high and low papers in Class B group. Other groups do not show as great a contrast, between the high and low, but the differences are quite large. For example, in the Class A group—1,000 tons or less annual consumption—the high figure is 5.82% and the low 1.30%, a difference of 4.52%; in the Class C group—5,000 to 20,000 tons—the difference is 5.50% with a high of 6.62% and a low of 1.12%; in the Class D group, composed of papers consuming over 20,000 tons annually, a difference of 3.59% with a high of 5.29% and a low of 1.70%.

"It is interesting to note the range in the various classifications. Ttransit and handling lists a low of .01%, followed by two offices with .02%, one with .03% and one with 0.4%. The high is 3.85%.

"Core waste is shown for one paper as .02%, and .03% for another. The high reported is .94%.

"White press waste is listed for one paper as .01% and for two others as .03%. The high is 1.25%.

"Spoils and printed show a low of .05% with the second low as .33%. The high is 8.19%.

"Wrapper waste shows one paper with a low of .34% and two with .38%. The high is 2.95%.

"An interesting observation of the comparisons just given is that the total of all waste for the lowest paper (1.12%) is lower than the high paper in each classification, excepting core waste.

"The high transit and handling waste (3.85%), for instance, is 3½ times greater, the white press high (1.25%) is 13 points higher; spoils and printed (8.19%) is over 7 times higher; the wrapper high (2.96%) is 2½ times greater. The high core waste (.95%), the only one that is lower, is 84% of the total (1.12%) for the low paper.

"Statistics are drab, but I want to impose on you for just one more comparison. It is the composite total of the lows and the composite total of the highs of each classification. For the low, we have transit, .01%, core .02%, white press .01%, spoils and printed .33% and wrapper .34%, making a composite low total of .71%.

"On the high side we have: transit 3.85%, core .94%, white press 1.25%, spoils and printed 8.19% and wrapper 2.96%, making a composite total of 17.19%.

"The difference between the composite high and the composite low is 16.48%."

Speaking under that section of his address dealing with spoils and printed waste, Mr. Corcoran stated one paper was rated as having an 8.19% spoils and printed waste total. He asserted it was hard for him to conceive of conditions making such a high figure necessary, except conditions might prevail in many plants making it impossible for those plants to compete with those papers having conditions ideally suited to the keeping down of the spoils and printed waste figure. He cited one paper which prints a great many color ads. The paper actually proofs the ads on the press by running it up to full speed. Sometimes this operation is repeated several times if the color effect shown by the first printing does not satisfy the advertiser or the artist.

Concluding his remarks, Mr. Corcoran said: "I think all of us should review carefully our paper-handling methods and check them with the methods of several other papers with lower waste percentages in our tonnage group. This check should be made with open mind eager to accept any improved methods that appear, and not with the idea of finding excuses for our higher waste figures."

Impression Pete

Reports his impressions about A. N. P. A. conference and pressroom session

WELL, the boss sez: "Pete, wash your face and go up to this mechanical executive concentration at Toronto and see if you can't learn something other than the correct way to mix highballs and new alibis for lousy printing." So I went and had a right smart time of it. I never saw a nicer bunch of fellows anywhere, and I've been to the county fair and the state capitol lots and lots of times.

There was one feller there named Lengel, Production Manager from Oakland, Calif., *Tribune*, that just paridoxed anything I ever seen in mixing colors. Sez I: "Al, run me up a real eye-knocking red," and derned if he didn't grab a yellow and a blue and rub them together and, shucks, there was the cutest danger signal red you ever seen. Not green—but red. And it seems he has a way of finding deeper possibilities in the fundamental colors than ever known before.

There was another chap there named Auburn Taylor. Tough boy, this chap, from way up in Charlestown, W. Va. on the *Gazette*. They call him "Bulldog" because he don't know when to quit and when he ain't knocking people around the prize ring he is rassling with his string of Goss presses and turns out just about the sweetest paper in his state. He invented an honest-to-goodness fountain, the dream of all pressmen. It's a fountain without a ductor roller but giving a continuous film of ink at all times at all speeds without flooding, graying or heating. He has sold this to the Goss Printing Press Company, who will manufacture and distribute it.

Just as I was coming outta the dining room, I met Dutch Miller going in. He stopped long enough to tell me how he gets such wonderful results on his printing of the *American Weekly* at the Chicago plant which he runs. Dutch explained that the many and various shades and values he secures from the same color on the same cylinders was brought about by conniving with the etcher and the stereotyper to get different gradations of bites on the same colors but on different plates and then having the stereotyper shave the plates that are to have the stronger color effect a bit thicker than the ones that are not to be too definite. Also, he has an electrically operated slitter that he uses at the nose of the former to slit tabloid products. This slitter is driven by a little motor that runs independent from the press all the time and makes a clean cut. Slitting the tabloid product at the point of the former holds the ribbons together smooth and snug for the folding or transferring operation. Dutch also has an electric compensating control for out-of-the-way sheets.

Well, sir, it just looked like every feller we met had something new to tell us and I had already figgered up where the boss would make several hundred percent on his expense of my trip when I heard them ringin' the bell for the Pressman's meeting on Wednesday afternoon. So I went on in, and boy, was it hotstuff! Walt Ogden was presiding and Dick Cooke of the Richmond (Va.) *News-Leader* was assisting him. Everyone had to come to the mike to speak, just as though those bozos couldn't be heard clean across Lake Ontario, what with yellin' "Lookout Press!" for so many years. Well, sir, there was a young fellow speaking and I thought he sure was a pressman from the technical knowledge he had, but gosh, he was T. A. Corcoran, purchasing agent from that miniature metropolitan paper the Louisville *Courier-Journal*. He buddies with M. George Martin, Production Manager. They tell me he and George is always writing around the country getting new production ideas and things that will keep the plant right up to date on newspaper printing. And Mr. Corcoran knows all about newsprint and how to handle it economically. Nice fellow.

And then Earl Weiskittle who is now press superintendent of the Youngstown (O.) *Vindicator* (one of the most modern plants in the middle west), spoke his piece. Golly, he used to pull the fly for old Impression Pete himself. Well, sir, it seems Earl had a case against the inkmaker who put mud in the mix and he sure give 'em hell for doing it, but Joe Oswald who used to run those Scott presses on the New York *Post* so darn fast they couldn't catch up with themselves, came up to the mike and sez if the publisher would quit chiseling the inkmakers' price down to nothing they could get good ink. So everybody got into the argument. Joe is now superintendent down at the Philadelphia *Inquirer* and I hear he is chasing those presses along just as fast as he did at the New York *Post*.

Well, sez I, this meeting is sure getting hot and mebbe I had better dust off the old brass knucks just in case and then I looks across the room and I see all the boys who was yellin' at each other quietin' down. Some boys, these pressmen.

And then we got down to the subject of ink misting and when Jack Park got up and sez he catches all the mist and keeps it where it belongs in on the rollers and had pictures showing how solid screens around the distributor rollers did the trick why I sure felt happy I was there. I understand Jack is doing pretty well as Production Manager of the Chicago *Tribune*.

(Contined on Page 49)

Adv.

Offset

What it will do for the small newspaper

By A USER

"For one individual to try and depict the future of the Offset printing process in the weekly or small daily field would be impossible. However, the immediate advances that are almost sure to be forthcoming in the next few years are quite visible. Here are my ideas in regard to Offset in the next four or five years."

"Accurate cost records of the two processes indicate very clearly that the weekly papers using a Webendorfer Offset press, a Vari-typer or other composing unit of the typewriter type and the newly perfected Print-A-Sign which is now available prove beyond a doubt that costs can be reduced as much as forty per cent in the weekly field right today."

"We found that a man who has absolutely no knowledge of printing was able to compose ads that would take several hours in the conventional back room of a regular weekly newspaper printed by letter press."

"With a modern camera and a Webendorfer Offset press we can materially reduce the cost of actually printing and assembling the newspaper."

"The cost alone should not be a deciding factor. There is another factor that is just as important as the cutting of the cost of production. That is the new field or opportunity that is open to publishers in the weekly field by the use of pictures. We have only to look to *Look*, *Life*, and *Pic* to see the phenomenal gains that they have made in circulation because of the use of pictures. Pictures have proven, beyond a doubt, that they are to be a more important factor in the production of a good newspaper in the future than they ever have in the past. The history of the above magazines is only one of the many outstanding examples of what pictures have done for the magazine and newspaper industry."

"The Offset Press gives one an opportunity to reproduce pictures in the Offset Weekly at a very small cost. We find that we can produce a whole page of local pictures for less than the cost of composition to fill the same amount of space. Also the speed and lack of delay in getting late timely pictures to our readers is an important factor to be considered."

"The next important factor that the average weekly newspaper producer considers is the ability to turn out a nice job. The Offset Press has proven that it has the necessary facilities to turn out a clean and readable print. In fact the soft halftone effects are far superior in the writer's opinion than those of letterpress printing on the average weekly newspaper press."

"The final and deciding factor should be 'What does the public think of this new process?' If the publisher is willing to take advantage of the opportunity he has by using the Offset method and reproduce his paper on a book paper which can be purchased for less than six cents a pound, he can give his readers a paper that is far superior to anything that has been produced in the weekly field to date."

"The writer is thoroughly sold on the new process and believes that it is going to be as great a step forward in the printing industry as was the ..... some thirty-five years ago. We are looking forward to meeting our competition, labor problems and the necessity of lowering production costs by the use of the photo-offset and typeless newspaper methods."

Booklets and brochures on the offset process and production, and their practical applications are available. No cost, no obligation. A line to the Webendorfer-Wills Co., Inc., Mt. Vernon, N. Y., puts you on our mailing list for informative releases and books.

Modern Men

KNOW . . The DIFFERENCE

There's a tremendous contrast in quality between the results of the old methods of mat-reproduction and the results obtained from Wood Dry Mats.

Halftones are crisp and clean and accurate . . . highlights are held white and bright . . . shadows kept as black as in the original . . . every elusive middletone retained.

Yes, there's a big difference when you use Wood Dry Mats . . . a difference in the reproduction you get and a difference in your peace of mind.

Ask any stereotyper who uses Wood Dry Mats. Or, better yet, write us for a sample package and prove it with a proof!

WOOD DRY MATS

WOOD FLONG

CORPORATION

HOOSICK FALLS

NEW YORK

Film

For photo-engraving expands use of pictures to 25% of news space at Minneapolis *Star*.

By D. D. CURRIDEN*

THREE years ago, a suddenly increased demand for illustration at the Minneapolis *Star* found our two wet plate cameras entirely inadequate to supply the volume of cuts desired with fast service. We were, at that time, producing thirty to forty halftone engravings daily for the *Star* in addition to some work for advertisers and some commercial engraving—and found ourselves unable to meet the new demand for engraving for the *Star* in addition to our other work.

A visit to several other cities and to newspaper engraving departments where film was in use, quickly convinced us that a better method of making negatives was the solution for our production difficulties, and we installed a roll film camera in January, 1936, discarding one of our wet plate cameras.

Our experience with this camera soon proved that the quality of negative, as well as its capacity for production would meet all demands for volume and service. The camera's production was so impressive that one year later we converted our other wet plate camera and dark room to be used for sheet film. This is a 24 in. gallery type camera with dial-focusing and four shutters at the back, enabling the operator to make four separate reductions without removing the plate holder.

A comparison of our capacity for production with this film equipment over the two wet plate cameras shows the following facts: With two wet plate cameras, and one man operating each, we could, under stress, produce 50 to 70 separate shots a day composed of newspaper halftone, line work and fine screens. With the two film cameras we are now easily able to produce 150 negatives a day, of average size.

With wet plate operation it is generally known to be a fact that the camera operator is unable to exceed four negatives per hour while we find that on the roll-film camera our operator is able in stress hours to produce 20 news halftone negatives per hour more easily than he produced four with wet plate operation. On the sheet film camera we make all line work, all fine screen negatives and some news halftones.

The service possibilities as well as the saving in labor cost at the camera is so obvious as to need no further comment.

Some explanation of the accessories necessary to successfully operate film, as well as our method of operation, may be desirable to show how our production is attained.

We have hot water at all sinks in the engraving department, but city water in July and August reaches a temperature of 75 to 80 deg. F. As dark room developer *must* be kept below 70 deg., when room temperatures often go over 90 deg. we found it necessary to install dark room equipment for cooling city water in the summer to 45 deg.

Developer and fixing trays of 20 in. by 24 in. size are placed on racks in larger trays of cool water which is piped into the larger outside trays and keeps the solutions at a temperature of from 65 to 68 deg.

Dark room equipment is now available which automatically maintains this necessary temperature. It assures you a consistently reliable production and a uniform dot structure in screen negatives as far as dark room processing is concerned.

On the roll film camera we average 1 1/16 to 1 1/8 copies per negatives—so you see we make many separate exposures. The operator scales the copy or copies, places it in the copy frame, sets the dials and horizontal shutter on the camera, rolls down the necessary length of film of either 6, 9½ or 19 in. width with a small hand crank and is ready to make his exposure. This group of operations takes about 30 seconds. Our exposures average about 1 min. each, as the roll film emulsion is very fast. Frequently 6 to 8 exposures of different reduction or enlargement are made on one strip of film before it is cut loose from the roll falling into a light-tight box inside the dark room at the back of the camera.

Adding this up, we find 20 "shots" at the front of the camera usually take 35 to 40 minutes, leaving 20 minutes for developing, fixing and washing in the dark room when they are ready for the stripper.

As the 20 shots are on 4 to 8 strips of film and developing takes from 1 to 1¼ min., fixing 2 min. and washing 2 min. (and these operations overlap— it is apparent that our 20 shots of small or average size are in the hands of the stripper in one hour.

Larger work or highlight halftone work, of course, will not be produced at this speed, but when you consider the many manipulations with wet plate, glass washing, collodion, silver baths, and the many operations in the dark room with varied and piosonous chemicals it is obvious that the use of film in your cameras will greatly increase production and assist in meeting modern service demand for illustration. On the sheet film camera with dial focusing and the four-exposure back it is clear that with four exposures on one sheet of film the operator only has to develop and fix five sheets to make 20 exposures per hour of small work easily possible. Six to eight per hour of fine screen or large work is easily secured with this equipment, depending on size of cuts ordered.

All negatives when finished and ready to go to the stripping sink are placed under sprays of the 45 deg. water which keeps the emulsion firm and hard until they are squared up or cut to size and grouped on flats for printing.

In stripping, some difference from wet plate negative handling is encountered. We have found from experience that we are able to strip film in any manner and to the same degree of accuracy as with wet plate negatives, whether it be combination work, superimposed halftones, or otherwise.

The first and most important requisite in any halftone of any screen (for letterpress printing) is the dot structure at the surface of the plate. The ink roller traveling across the surface leaves an even, thin film of ink on these dots and this, impressed on paper, gives the eye the impression of the varying shades of tones of color of a photograph or drawing. These dots must, by their character, reproduce clearly and accurately the sharpness, the detail, the contrast and quality of the original copy.

Without exception, we have found cuts made from film negatives, in dot structure, in the gradation of tone values in shadow, middletone and highlight dots in both coarse and fine screen of finest quality.

Film emulsion is not as dense as wet plate and we find a horizontal vacuum printing frame with an overhead arc lamp very efficient in enabling our printer to secure the best results in printing from film negatives on metal. The printer masks negatives more easily in this position and to a more accurate degree, thus securing the best results.

A mechanical whirler is used which has speed and heat control—thus giving us a precision coating on all plates whether we use cold top enamel, glue top or albumen solutions for sensitizing metal.

May I close by giving you the expression of our Mechanical Superintendent, C. H. Jorgensen, on film use for engraving as he sees it from his office.

"Our experience since the installation of film for use in the engraving department warrants strong recommendation from us. The quality and increased production attained by the *Star* has made it possible for us to use more pictures than most daily newspapers.

"It was inconceivable, when we went to film that production would be stepped up to 50 to 100 pieces of copy daily with slight change in the personnel of the department and making it possible in a comparatively small plant to not only devote 20 to 25% of our news space to pictures, but to find the operation so flexible that picture pages could be treated as news pages and made over with new art during the daily run.

"I think the development of film has been an incentive to the use of more pictures and this will be increasingly so. The increased volume of business attendant on improved production methods has always been beneficial to employees as well as employers.

"Many are skeptical of its possibilities, however, and I find that even a conservative statement of results often meets with a doubting silence or a frank contradiction. So it is best to understate the facts."

*Superintendent of Photo-engraving for Minneapolis *Star*. Resume of talk before the Chicago Photo-Engravers' Association meeting, Bismarck Hotel, Chicago, June 16, 1938.

Bingham to Distribute Frapomists

Frazier Processes Inc., announces the appointment of Sam'l Bingham's Son Mfg. Co. exclusive agents for the sale of its products including Frapomist Roller Spray and Fratex Resilient Packing Material in the Central West. This territory will be from Harrisburg, Pennsylvania to the Rocky Mountains and from the Canadian Border to the Gulf of Mexico.

Interscript and Other New Faces

Intertype Corporation announces the cutting of a 14 point upright script face for the stationery and card specialist. The face will be known as Interscript. Both the Cairo and Beton families are being extended. Cario Bold is now being duplexed with bold Italic and small caps. In the Beton family the 11 point size has been added.

This paragraph set on the Intertype in the 11 point size of Interscript. $1234567

THIS paragraph set in Eleven Point Intertype Beton Medium with **Beton Bold** $1234567890

THIS paragraph is set in 12 Point CAIRO Bold with *Italic and* SMALL CAPS 1234

"I Got These CERTIFIEDS Just for a Trial"

THE Stereo Supt. so explains the strange label on the packing cases. "We might get into a rut if we shut our ears on the mat question. These three cases will give the boys a chance to get used to Certifieds and if they are as good as some stereotypers claim, I want to know it."

And so another steady user of Certified Mats is in the making.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M
New York, N. Y.

Certified
DRY MATS

This ONE-PIECE Heating Unit for Linotype Pots Replaces the TWO Elements Now in Use.

DESCRIPTIVE CIRCULAR ON REQUEST

Double Chromalox Heating Unit
$30.00

- HEATS UP MORE QUICKLY—
- LASTS LONGER—
- EASIER TO INSTALL—MUCH MORE EASILY REMOVED—
- MUCH HEAVIER PROTECTIVE CASING—
- ELIMINATES ACCUMULATION OF DROSS BETWEEN ELEMENTS—
- 30% LESS CASH INVESTMENT.

TRADE ★ MARK

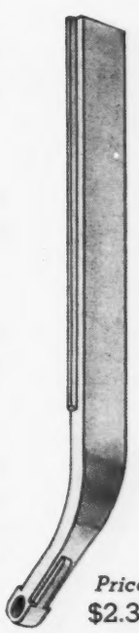
IMPROVED EJECTOR BLADE CONTROLLER

(Part F2111A)

The **Extension Ledge** insures that the slug will be pushed out into the galley, at ejection.

The purpose of the ledge is to make up for wear of the entire slug ejection mechanism.

The beveled pin will facilitate installation. Method of manufacture has been changed so as to insure greater accuracy in placement of the hole.



Price $2.30

ACE CORD RUBBER BELTS FOR TYPESETTING MACHINES ARE THE ONLY ONES GUARANTEED FOR A MINIMUM OF A YEAR'S SERVICE.

LINOTYPE PARTS COMPANY

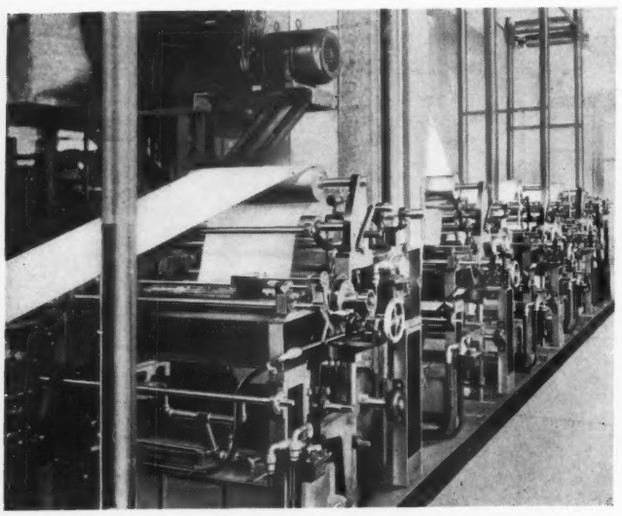
NEW YORK, N. Y.
203 Lafayette St.

KANSAS CITY, MO.
314 West 10th St.

Chicago—318 West Randolph St.
Minneapolis—503 Fourth Ave. S.
Los Angeles — 1520 Georgia St.

Equipment and Supplies

(Continued from Page 24)



Several units of the Chambon Gravure Press in line. Special operations may also be done by means of separate units.

Champlain Unit-Type Gravure Press

Chambon Corporation announces the new Champlain Gravure Printing Press of the multiple unit type covering a range of form sizes from 10 in. by 12 in. to as large as 40 in. by 42 in. The press is designed for runs of 100,000 or more. Manufacturer states it is suitable for production of all types of printing such as labels, wrappers, envelopes, displays, catalogs, booklets, magazine covers, inserts, and for printing waxed paper, parchment, foil, tissue, wallpaper, fancy and decorative papers, and so on.

Features of the press are the method of bringing ink to the paper and the shortening of the web between printing units. Each unit is fitted with a dial to show pressure per linear inch of contact between the impression cylinder and the engraving. Running register controls are centralized in one panel, electrically operated, designed to coordinate with the Champlain photo-electric visual register device which advises the press operator of discrepancy in the register. Correction can be made without disrupting top speed of the press.

The press can be equipped with special units for fabricating the printed web as desired, performing such operations as sheeting, slitting, punching, perforating, scoring, rewinding, etc.

Micrometer adjustment of the doctor blade is provided. The blade is located approximately 180 deg. around the cylinder from the ink applicator to minimize ink evaporation during the travel of the ink film to the doctor blade from the ink applicator. A special protective shield over the cylinder and in close proximity to it prevents ink evaporation during the time the ink-filled cells of the cylinder travel from the doctor blade to the impression line.

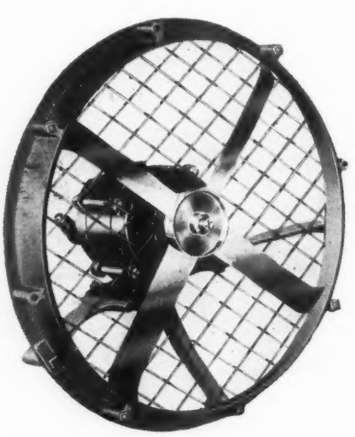
The ink is carried in a reservoir at the bottom of each printing unit. The reservoir is fully enclosed and is equipped with a self-contained pump which forces the ink under moderate pressure to the ink applicator. As the gravure cylinder revolves against the ink applicator it receives a thin film of ink over its entire surface. Manufacturer states special shape of the applicator assists in squeezing the ink into the pockets of the engraving.

Further details may be secured from Chambon Corporation direct or in care of *Printing* Equipment *Engineer*.

P-Double-E File Nos. 2B13 and 5LL18.

DeVilbiss Type JG Exhaust Fan

An exhaust fan, designed to effect rapid movement of a large volume of free air, has been added to the standard line of The DeVilbiss Company. These fans, available with ¼ h.p. or ½ h.p. direct-connected electric motors are for use wherever a general vapor, fume or dust condition prevails.



DeVilbiss exhaust fan discharges vapors, fumes or dust. Four-bladed model moves 6350 cu. ft. per min.

The ball-bearing, electric motors operate smoothly with minimum power consumption, and can be installed in window, wall or ceiling openings.

The ½ h.p. motor turns a four-bladed fan 1725 r.p.m. to move 6350 cubic feet per minute. Where exhaust volume requirements are somewhat less, the two-bladed fan on the ¼ h.p. motor removes 5250 cubic feet per min. at the same r.p.m.

Blades are air foil type, states manufacturer, are made of highly polished aluminum to provide maximum draft with minimum size and weight. The one-piece galvanized wire screen safety guard bolted on motor side of the fan gives necessary protection when installation is within reach of persons in the room.

Complete information may be secured from The DeVilbiss Company direct or in care of *Printing* Equipment *Engineer*.

P-Double-E File No. 8A.

Oversight

Through an oversight in the announcement of the Acraplate Vulcanizer appearing on page 58 of the June issue, mention of the manufacturer of the machine was omitted. The Acraplate Vulcanizer is made by The Lake Erie Engineering Corporation, Kenmore Station, Buffalo, N. Y., to whom all inquiries concerning the machine should be addressed, or *Printing* Equipment *Engineer* will gladly transmit your request for information.

P-Double-E File No. 2F3.

Improved Router Bit

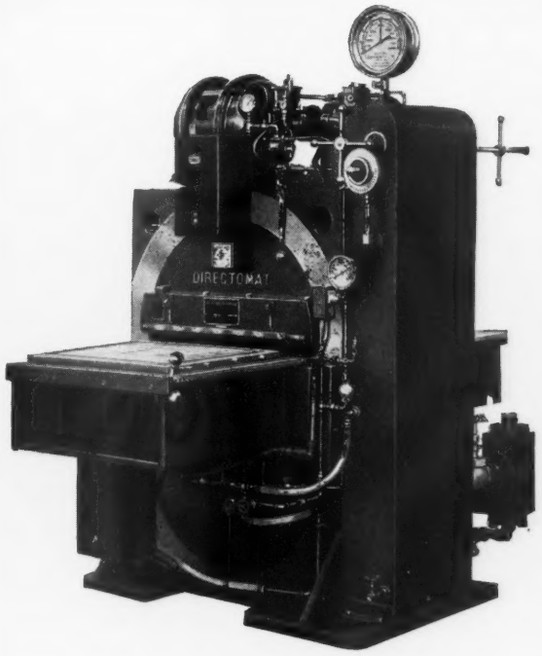
The Onsrud Machine Works announces development of a router tool for the engraving and stereotype trades. It is announced that the company's research department has developed for the bits a special alloy high-speed steel which is tough and flawless. Through heat treatment the bits are tempered and drawn to a Rockwell C hardness of 60. By means of a superficial case-hardening process the cutting edge of the steel is brought up to 62 points Rockwell C which is claimed to be 2 points harder than heretofore. A slightly softer backing in the bit is designed to prevent breakage.

A research section in the Cutter Division is maintained to handle specifications for bit orders to satisfy the demands of those having ideas for special requirements. The research section also analyzes innumerable cutter requirements where special plates, such as die steel and so on, are to be cut.

Further information respecting the new bits announced above may be obtained from the Onsrud Machine Works direct or in care of *Printing* Equipment *Engineer*.

P-Double-E File No. 2E26 and 2G35.

Section of photoengraving and stereotype bit manufacturing department in plant of the Onsrud Machine Works, Chicago. This department has grown to its present size from the original two-man department.



INVESTIGATE *the* LAKE ERIE DIRECTOMAT

If you are an authority on stereotype equipment and have kept right up to the minute on the improvements in design and construction, then the DIRECTOMAT will appeal to you for a dozen very good reasons.

The positive pressure control, the automatic pressure drop, the suction device, the high speed—these and many other DIRECTOMAT features will make it easy for you to understand why this press has earned its good reputation.

And if you know little about the mechanics of stereotype machinery, it will be just as easy for you to understand the soundness of Lake Erie construction when you compare SALES with those of other makes—which is actual proof of greatest value. And you can make your moulding press purchase with just as much confidence as an expert.

The DIRECTOMAT has the capacity of TWO Matrix Rollers, while requiring the space of only ONE Roller. It positively produces a better and sharper mat. Everybody says it. Over fifty installations prove it.

Lake Erie Stereotype Equipment Corp.
Buffalo, N. Y.

Please mail complete information on DIRECTOMAT performance and economies to my personal attention.

NAME..... ..... TITLE.....

CONCERN ....

STREET .....

CITY ....

BURGESS CHROME MATS

BURGESS CHROME MATS

BURGESS CHROME MATS

Let...

Burgess Chrome Mats

assist you with your shrinkage problem. Ask for demonstration.

•

CHROME MATS

A Laboratory Product Made in U. S. A.

•

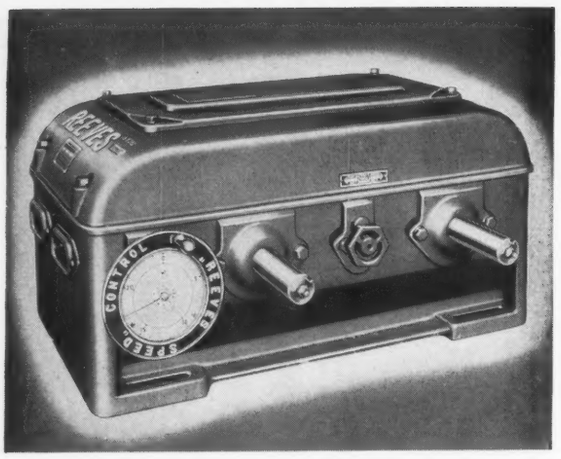
Burgess Cellulose Co.

Freeport, Illinois

Pacific Coast Representative, RALPH LEBER,
426 Polson Bldg., Seattle, Washington

A337

BURGESS CHROME MATS



This illustration is printed direct from an Ebolite halftone, 120 line screen. Process is purely photographic and chemical. A plastic film carries the printing image.

Improved Ebolite Cuts

During the past three years, Joseph T. Cochran of the American Process Corporation, states considerable money has been spent in improving the Ebolite halftone. The method of producing these cuts is entirely photographic, *i.e.*, they are developed from a film or plastic base. Mr. Cochran states the material remains similar, plates have a satisfactory depth for printing, tone values have been much improved and an entirely different method of mounting used. Plates are mounted flush. Sponsor states electrotypes can be made from Ebolite cuts. Runs as high as 74,000 impressions have been made on actual press jobs, according to letters received from customers by the company. Makeready is similar to that given by the pressman to other halftones. Ebolite halftones are made with 100, 120 and 133 line screens.

An announcement received from the makers states: Publishers and other users who want to benefit from the quality and low cost of "Ebolite" halftones must buy them through established printers, as the sales policy of the makers require this procedure. It is believed that letterpress printers thus will be enabled to compete with planograph process in pictorial reproductions.

Transmission for Printing Presses

New models of the Graham Variable Speed Transmission from 1/6 to 15 h.p. with features which broaden the scope and application of this type of equipment, have been announced by Graham Transmissions Inc.

By means of a tractional device, which automatically keeps the drive pressure in proportion to both the load and the speed, states manufacturer, the Graham maintains full torque all the way to zero speeds. It transmits full motor power over a range of 4:1, and gives speeds in infinite steps from any desired maximum to zero and reverse. Speed is adjustable, either stationary or running.

Use of this transmission on printing presses enables the operator to: (1.) Maintain full torque for makeready work requiring slow speed; (2.) Adjust speed in accordance with the matter being printed; (3.) Start presses feeding from rolls at zero speed setting and control acceleration to prevent tearing of the paper.

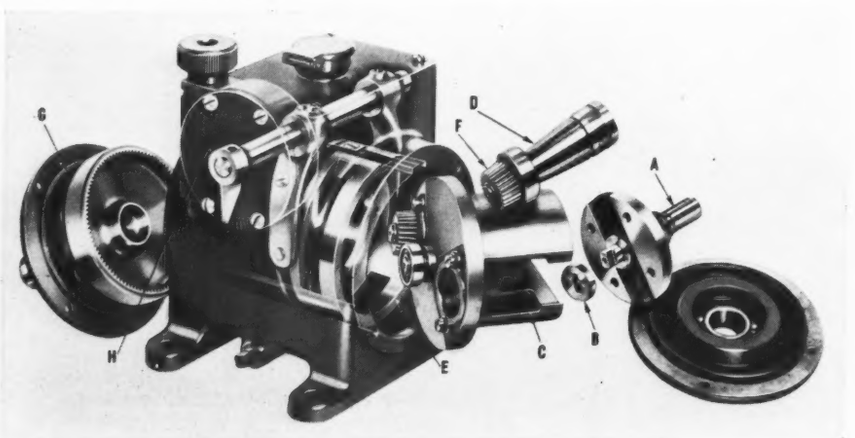
The Graham Variable Speed Transmission is based on the principle of a ring of fixed diameter in contact with conical rollers, the speed ratio depending on the ratio of the diameter of the ring to the diameter of the rollers at the point of contact.

The phantom picture illustrates the essential elements in the drive. Two conical rollers (D) are carried in the carrier (C) spaced 180 deg. apart. The rollers bear under pressure against the contact ring (E) which surrounds the carrier. The position of (E) can be varied axially by means of the control wheel (H). The carrier (C) is attached to the drive or input shaft through the medium of the cam (B). The rollers (D) carry at their small ends pinions (F) which mesh with a ring gear (G) attached to the driven or output shaft.

In operation, as the shaft (A) is rotated the cam transmits this rotation to the carrier (C) and at the same time applies a pressure to the ring which automatically conforms to the requirement of both the speed and the load. This pressure between the rollers and the ring causes the rollers to rotate about their own axes, and in turn to drive the output shaft through the pinions and gear (F and G.) The rate of the rotation of the rollers, and consequently the speed of the output shaft, depends on the position of the contact ring (E). The speed of the driven shaft is highest when the ring is in contact with the largest diameter of the rollers and lowest when it is in contact with the smallest diameter.

Speed is easily changed, either manually or automatically. Worm control is standard, and lever control is available when desired. The transmission comes either with motor built in or coupled. Made in two styles, either standard or with built-in gear—either reduction or step-up.

P-Double-E File No. 5CC.

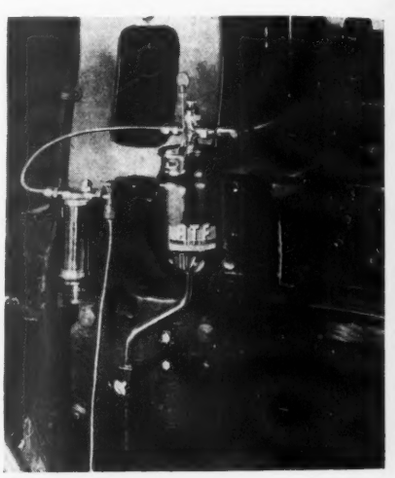


Phantomed and partially dissembled view of new Graham Variable Speed Transmissions built in sizes from 1/6 to 15 h.p.

ATF Vapor Unit

Following exhaustive tests, ATF Vapor Unit, (a device that acts as a local humidifier) is now on the market. By its use, states ATF, definite advantages have been proved for lengthening the life of rollers, keeping them tacky, cutting down on excessive ink consumption, increasing press production by fewer stops, and improving the quality of printing. The vaporized solution sprayed above the rollers is a mixture of glycerin and water—3 ounces of glycerin in a quart of water.

ATF Vapor Unit is entirely air-operated and attaches to the side of the press. It is available in three models: Model 1 operates on air from the press plunger; Model 2 from a central air line or compressor; Model 3 in tandem with the ATF Non-Offset Gun. The Vapor Unit consumes ¼ cu. ft. per min., or one-fourth as much as the ATF Gun. An air cleaner, flexible oil-proof copper tubing and ATF's exclusive Tru-Flate Quick Connector are standard equipment with all models.



ATF Vapor Unit in action on a printing press.

The benefits claimed for ATF Vapor Unit are applicable to all types of letterpress printing rollers—composition, non-meltable, rubber, synthetic and process. Other benefits shown by the tests are a reduction in the number of washups, better ink distribution, cooler rollers, less picking. Prominent roller and ink manufacturers have given their approval to the device, says ATF. Descriptive literature and prices may be obtained from ATF Salesmen, or by writing to ATF direct.

P-Double-E File No. 00000

Linograph "50"

Announcement of the Linograph "50" line-composing machine has been made by Linograph Corporation. The Linograph "50" accepts standard size matrices.

In addition to handling standard matrices, the Linograph "50" accommodates any font

For good Presswork

an inking roller must be SOFT!

An all-season roller that is too hard for good ink distribution . . . and they usually grow harder as they grow older . . . is just about as troublesome as an ordinary composition roller. The latter will at least give you good distributing qualities . . . if you can run it slow enough in hot weather to prevent melting . . . but a hard "all-season" roller is troublesome in any kind of weather.

The real answer to the roller problem is the Vulcan Gelastic Roller, as thousands of printers will testify. Here you have a roller that is remarkably soft and resilient . . . yet wholly unaffected by extremes of heat and cold. Your Gelastic Roller does what a roller is meant to do . . . applies ink efficiently and uniformly to the top of the type and halftone dots . . . and to the top only . . . and not to the sides as do less resilient rollers. For this reason, Vulcan Gelastic Rollers promote clean, sharp, uniform printing, regardless of temperature or humidity.

The Gelastic Roller does not shrink, swell, chip, or crack. It is not affected by inks, oils, driers, or washes. It eliminates the need for frequent resetting; and, above all, it is made to a degree of softness never before approached by any other roller of this kind.

On all kinds of presses and all kinds of work, Vulcan Gelastic Rollers have established new standards of printing quality, economy, and freedom from service troubles. *Write for details.*

VULCAN PROOFING COMPANY
58th St. and 1st Ave., Brooklyn, N. Y.
608 S. Dearborn St., Chicago, Ill.
Sales Representatives in Principal Cities

Vulcan Gelastic Rollers

Use It Sparingly!

We have always encouraged production and mechanical executive buyers of Booth's Zink Cut Cement to see that it is used sparingly.

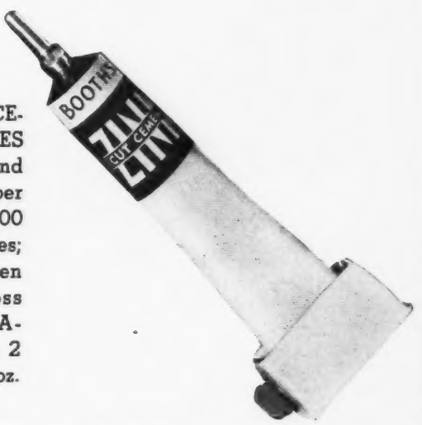
The reasons for using the cement properly are:

[1] It holds cuts much better than when excess quantity is applied.

[2] It can't ooze out from between cut and base to ruin stereotype mats.

[3] It is more economical because a tube will cement a greater number of cuts.

We are interested in seeing that our production and mechanical executive customers obtain the maximum benefits of this cement for fastening all kinds of cuts to wood or metal base.



ZINK CUT CEMENT PRICES in the U. S. and Canada: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots. Stand-A-Lone Holders 2 for 25c, per doz. $1.00.

Booth's Green Rubber Keyboard Rolls

are functioning *dependably* day in and day out on many Linotype and Intertype composing machines. These rolls are round—they are resilient and do not glaze readily. In connection with properly oiled keyboard cams they will last a long time.

A trial pair will cost you $1.30. The dozen rate is $7.00. These prices apply in U. S. and Canada only.

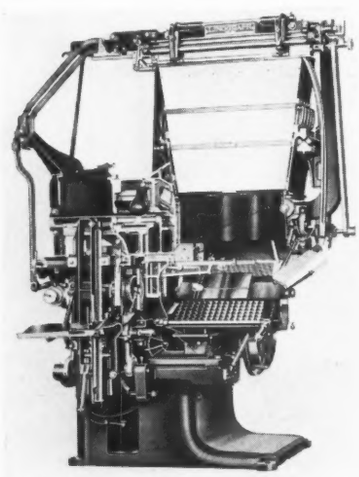
E. A. BOOTH
RUBBER COMPANY
364 ROCKEFELLER BUILDING · CLEVELAND, OHIO

that has a 297 point or smaller lower case alphabet. Many large faces can be handled from regular Linograph magazines.

This latest Linograph is equipped with five vertical magazines. Manufacturer states the short matrix travel and fast return to the magazine by means of a "2 in 1" distributor permits Linograph "50" to function continuously with 17 matrices per channel.

The distributor is equipped with a type of cam lift which lifts large matrices at every other revolution of the screw and small matrices at every revolution. In the case of the smaller matrices, a lateral travel speed of 8 ft. per min. delivers 384 matrices per minute to the magazine.

The interchangeable magazines are removed, mounted and locked in the magazine cradle quickly and easily. Shifting the magazines back and forth to operating position for any of the five magazines may be accomplished by raising a hand-engaging lever and a finger tip touch on the cradle. The cradle is rigidly



mounted but free running on hardened ball bearing rollers.

Other improvements announced by manufacturer are: Single-lever spaceband transfer; second elevator parallelogram which operates with short travel and maintains alignment for seating at both upper and lower positions; easy-touch keyboard with quickly removable cams and yokes, individual cam stop pins and keyrods without springs which are interchangeable; a steel crucible which is repairable in case of leaks, although the possibility of leaks is remote.

P-Double-E File No. 1G.

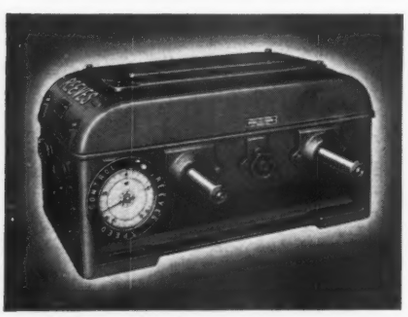
Reeves "Speedial" Handwheel

The Reeves Pulley Company announces a new type speed indicator for use with Reeves variable speed control equipment. It is the "Speedial" handwheel (optional equipment) in place of the regular speed control handwheel and the dial type indicator for all sizes of Variable Speed Transmission and Vari-Speed Motor Pulley. The Speedial handwheel may also be substituted for the standard handwheel, hand crank or handwheel type speed indicator on those units already in service.

The Speedial handwheel registers accurately speed settings of the various Reeves units. The indication is a definite number of turns (and fractions of turns) of the shifting screw. These are read by the operator as he turns the Speedial. While the standard Speedial is calibrated in turns of the shifting screw, space is available on the dial for the user to mark in pen or pencil his own calibrations in whatever corresponding units he prefers.

Depending upon the class of transmission, gear ratios of 25:1 and 50:1 are available. The dial is calibrated in accordance with these ratios in from 0 to 25 turns and 0 to 50 turns of the shifting screw. These calibrations appear around the circumference. The smaller scale, printed in red, represents tenths of a turn and a small pointer printed on the transparent cover indicates these turns.

P-Double-E File No. 5CC.

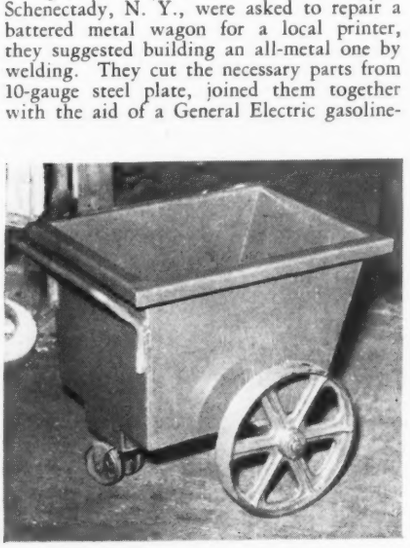


Horizontal enclosed design Reeves Transmission equipment with new Speedial handwheel. This device may also be applied to Vari-Speed Motor Pulley.

Stout Metal Wagon

Type metal which is to be remelted is heavy and the small wagons or carts which are used to haul type and slugs from the composing room to the melting pot must withstand a great many hard knocks.

When the Tessier brothers, Andrew and George, who operate a machine shop in Schenectady, N. Y., were asked to repair a battered metal wagon for a local printer, they suggested building an all-metal one by welding. They cut the necessary parts from 10-gauge steel plate, joined them together with the aid of a General Electric gasoline-



engine-driven arc welding set, bolted the welded box to the original axle and wheels, and, except for a coat of paint, the job was finished.

It will take a lot of type and a great many trips to the melting pot to wear out the new little cart. Because it is so solidly built, states its maker, woe be to the hapless printer who fetches it an impatient kick.

Size O, A.C. Magnetic Controllers

The Nema Size O, a.c. Magnetic Contactor for small continuous-duty single and polyphase motors has been placed on the market by Cutler-Hammer, Inc. Available in 2, 3 and 4-pole construction with maximum ratings of 1½ h.p. for single and 2 h.p. for polyphase, it can also be secured in skeleton form for built-in use.

Manufacturer states long life of the silver-to-silver butt-type contacts is guaranteed because the "twin-break" function reduces the arc, and operation in a restricted pocket cools it. All moving parts are pivoted and the self-aligning armature eliminates sliding friction to allow close guiding of the contact pressure and to maintain quiet operation which is additionally aided by rubber mounting.

Manufacturer further states the solid, 100% filled vacuum impregnated magnet coil is easily accessible, assures high heat conductivity, will withstand high operating temperatures without damage, is moisture-proof and the solvent-free impregnating compound is non-softening.

The Nema Type 1 enclosure or case is compact (measures 4⅞ in. by 7⅞ in. by 4 in.), has a hook-on cover removable by loosening one screw and aluminum finished interior for better vision.

Production Coated E. F.

Production Coated E. F. has been created, states Consolidated Water Power & Paper Company, for magazine, book, catalog, pamphlet and advertising printing; where a rich, lustrous feel and appearance are desired, where beauty of halftone illustration must be faithfully reproduced (demands that uncoated papers cannot properly serve), and where at the same time the inherent English finish qualities of economy of paper cost, of ease and speed of printing, must be adhered to rigidly.

Production Coated E. F. is formed, dried and completely coated on both sides in one operation on the paper-making machine.

Manufactured for halftone reproduction up to and including 120-line screen, this paper provides for the user of English Finish paper the same dominant paper qualities which have been enjoyed by the users of coated paper for many years. Because Production Coated E. F. has been fully coated on each side, both are said to be identical to the eye, to the touch and to the plates and ink of the printing press.

Further, it is stated by manufacturer, each minute part of its printing surface is identical in smoothness and ink receptivity. Like every true coated paper, it maintains the brilliance of inks. The complete coating on both sides of Production Coated E. F. accounts for its ability to produce a clearness of halftone illustration.

A colorful piece of literature entitled *History of Modern Paper Making* describing Production Coated E. F. in detail, is now being prepared for general distribution.

P-Double-E File No. 3K.

Simplified Use of Shim Stock

The "Economy Carton" containing shim stock is being introduced by Laminated Shim Company. Packed within the carton is an assortment of shim stock consisting of four rolls 50 in. long, in 0.001 in., 0.002 in., 0.003 in. and 0.005 in. thicknesses. This stock is

special shim brass. The shop or maintenance man pulls the thin shim stock through the carton slots and cuts it off as needed. Trouble in handling is eliminated; time is saved; wrinkling and waste of stock are prevented.

The "Economy Carton" with its shim stock contents is catalogued as Brass Shim Stock Kit No. 88.

YESTERDAY
GEE IT'S A MEAN JOB TO CLEAN OFF THESE BACKS
SOMEDAY SOMEONE IS GOING TO SHORT-CUT ALL THIS DIRTY WORK
TODAY
REMEMBER THE HOURS WE USED TO SPEND SCRUBBING OFF THAT MESSY RESIST
YOU SAID IT BILL, TODAY I SAVE A LOT OF TIME ON BACKOTE SHEETS
ZOMO BACKOTE
A-Z ALLOY BACKOTE

MANY ENGRAVERS report that they can save at least five minutes on every Backote Sheet. Backote means better work too, because its acid-resistant metallic coating is applied with scientific evenness over the entire surface of the sheet—no bumps or ridges or holes in the back of the completed cut. Also, Backote sheets eliminate the mess, drudgery and danger of the old asphaltum process. You can order Zomo Electric Backote and A-Z Backote sheets from leading metal suppliers in the United States, Canada and England.

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● Trouble is also waiting behind the door for type metal users who think that a supply of once-upon-a-time-new metal or the infrequent addition of toner is a lasting solution to all metal problems. The plants that *are* safe from metal trouble are those that keep a constant check on the condition of their metal.

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Patents

Recently Granted By U. S. Patent Office

Book Binding:

2,229,511. BINDING OF BOOKLETS, CATALOGS, OR THE LIKE. Albert Edward Perkins, London, England. Application March 24, 1937, Serial No. 132,778. In Great Britain March 30, 1936. 8 Claims. (Cl. 11—4.)

1. A wire stitching machine for saddle stitching booklets, catalogs and the like comprising a stitcher head, a plurality of signature feeding stations, a saddle bar at each feeding station upon which signatures are positioned, a saddle bar for a book cover between one of the saddle bars and the stitcher head, a conveyor chain running below the saddle bars, pusher members upon the chain engageable with the signatures upon the several saddle bars and conveying the gathered signatures and a cover to the stitcher head to be stitched and means positioned between a signature saddle bar and the cover saddle bar for applying an adhesive to the back of at least the outer signature of the book prior to the cover being laid thereupon and stitched to the collated signatures.

Composing Machines:

2,117,474. CONTROL MECHANISM FOR LINE-CASTING AND COMPOSING MACHINES. Maurus T. Goetz and Harold W. Hudson, Chicago, Ill., assignors, by mesne assignments, to Teletypesetter Corporation, a corporation of Delaware. Application February 27, 1937, Serial No. 128,147. 19 Claims. (Cl. 199—51.)

1. In a selector mechanism, a plurality of ordinarily individually responsive instrumentalities, a pair of concurrently responsive instrumentalities, and means controlled by one of the last mentioned instrumentalities for causing one of the ordinarily individually responsive instrumentalities to respond concurrently with the pair of instrumentalities.

2,117,555. ASSEMBLER MECHANISM OF TYPOGRAPHICAL COMPOSING MACHINES. Arthur Staniland Hayward, Altrincham, England, assignor to Linotype and Machinery Limited, London, England, a registered company. Application February 10, 1937, Serial No. 125,023. In Great Britain February 15, 1936. 20 Claims. (Cl. 199—21.)

1. A device for setting an adjustable section of the assembler entrance in a typographical composing machine adapted to be equipped with a pair of superposed matrix magazines and wherein the section is adjustable to two different positions to make and break an operative connection between either one of the magazines and a fixed section of the assembler entrance, the device comprising a power-driven member and a key controlled member adapted for frictional engagement therewith to actuate a mechanical power transmission system for moving the adjustable section to the desired setting.

2,117,557. TYPOGRAPHICAL MACHINE. John H. Hilpman, Springfield Gardens, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application July 25, 1936, Serial No. 92,563. 20 Claims. (Cl. 199—32.)

1. In a typographical composing machine, the combination with a movable line transfer carriage having two fingers to engage the line at opposite ends, one finger being fixed to the carriage and the other movable with respect thereto, of means operated by the composed line for establishing a motion transmitting connection between the movable finger and the carriage for movement independently of the line in the line transfer operation.

2,117,576. MEANS FOR CHANGING THE MAGAZINES OF TYPOGRAPHICAL COMPOSING MACHINES. Richard Henry Scott, Enfield, England, assignor to Linotype and Machinery Limited, London, England, a registered company of England. Application February 10, 1937, Serial No. 125,029. In Great Britain February 14, 1936. 7 Claims. (Cl. 199—46)

1. A typographical composing machine provided with an adjustable column of magazines, comprising, on a fixed frame in which the column of magazines is adjustable, extensible arms adapted to provide support, during removal, for the magazine which is, for the time being, in the plane of the arms.

2,118,927. SLUG CASTING MACHINE. George Peyton Kingsbury, Hollis, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application May 9, 1934, Serial No. 724,717. 20 Claims. (Cl. 199—47.)

1. In a slug casting machine, the combination of means for casting a slug during a machine cycle of operation, and a selector associated with the machine and adapted when in one position to automatically inaugurate a predetermined number of machine cycles of operation and when in another position to automatically inaugurate a different predetermined number of machine cycles of operation.

2,120,517. KEYBOARD PERFORATOR AND COUNTER. Kimmel A Sylvester, Chicago, Ill. assignor, by mesne assignments, to Teletypesetter Corporation, a corporation of Delaware. Application April 18, 1936, Serial No. 75,081. 28 Claims. (Cl. 164—112.)

1. In an apparatus for preparing control strips for line-casting machines, an indicator, a counting mechanism operable under certain conditions for operating the indicator, automatic means cooperable with the counting mechanism for augmenting the extent of operation of the indicator, and automatic means cooperable with the counting mechanism for decreasing the effect of the counting mechanism upon the indicator.

Feeding, Folding, Delivery:

2,118,816. WEB ASSOCIATING MECHANISM FOR PRINTING MACHINES. Frederick Lamatsch, Grantwood, N. J., and Albert J. Horton, White Plains, N. Y., assignors to R. Hoe & Co., Inc., New York, N Y. a corporation of New York. Application December 31, 1935, Serial No. 56,858. 16 Claims. (Cl. 270—17.)

1. The method of forming a folded product having, as an inset, portions of a pre-printed web associated with the webs being led from a printing machine, which includes leading the pre-printed web to a point adjacent to and

Patent Papers

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between the webs from the machine, registering the printed impressions on the pre-printed web with corresponding printed impressions on the other webs, then cutting the pre-printed web into sheets and causing feeding means to engage them one at a time as cut, to urge each sheet into association with the other webs, and then folding the associated webs and sheet.

2,120,778. METHOD OF SUPPLYING PAPER TO PRINTING PRESSES. John A. Dunlap, Chicago, Ill., assignor to Allan J. Cline, Chicago, Ill. Application August 24, 1931, Serial No. 559,112. 10 Claims. (Cl 242—58.)

2. The method of poining the webs of successive rolls of paper supplying a printing press, which consists in bringing a new roll having dry adhesive applied to the web up to desired speed through the action of the running web, and moistening the adhesive while the new roll is rotating, whereby the adhesive is caused to adhere to the expiring web thus connecting the new web without stopping the press.

2,120,846. AUTOMATIC REEL FOR PAPER ROLLS. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application August 17, 1932, Serial No. 629,105. Renewed April 3, 1937. 2 Claims. (Cl. 242—64.)

1. In a web roll supporting reel, the combination of a frame having bearings, bearing boxes rotatably mounted in the bearings, a shaft extending from one bearing to the other, spiders on the shaft constituting a web roll support, means for fixing the shaft to the two bearing boxes so that they will rotate together, one of the bearing boxes having a worm gear, a motor carried by the frame, means operated by the motor for turning the worm gear for rotating the reel, an end bracket fixed with respect to the worm wheel, a motor carried by the end bracket concentrically with the shaft, and means operated by the second motor for shifting the spiders along the shaft.

Miscellaneous:

2,116,948. PRINTING TYPE SPACER OR THE LIKE. Frank J. Lemieux, Rumford, R. I. Application July 6, 1937, Serial No. 152,032. 11 Claims. (Cl. 101—398.)

1. A Type unit comprising a block-like body having vertical walls extending upwardly from its foot with the walls which engage the next unit on the same line of type smooth, the wall extending from the lower edge of the lette r provided with a groove and the wall extending from the upper edge of the letter provided with a spur and extending but a portion of the distance across the wall and tapered to merge into the wall from which it extends.

2,117,722. PRINTING CYLINDER. Owen R. Huggins, South Norwalk, Conn., assignor to Photo-Cylinder Corporation, a corporation of New York. Application October 19, 1935, Serial No. 45,707. 14 Claims. (Cl. 101—401.1.)

1. The method of salvaging a spent printing cylinder which comprises restoring the cylinder to substantially its original outside diameter, and then restoring the printing wall of the cylinder to substantially its original thickness by casting a lining therein.

2,120,393. PRINTING INK. Richard A. Crawford, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York. No Drawing. Application December 12, 1935, Serial No. 54,087. 1 Claim. (Cl. 134—17.)

A printing ink containing as a vehicle heat-liquified rubber.

2,120,588. PRINTING INK. Joseph G. Curado, Jackson Heights, Long Island, N. Y., assignor to General Printing Ink Corporation, New York, N. Y., a corporation of Delaware. No Drawing. Application May 16, 1936, Serial No. 80,168. 3 Claims. (Cl. 134—35.)

1. In the manufacture of printing inks from pulp pigments, the steps of treating water wet filter press cake pulp containing in the neighborhood of 70-85% water, with a wetting agent, whereby the pigment particles are substantially completely dispersed in the water of the pulp, and whereby each individual particle is surrounded by a film of water, and thereafter stably emulsifying the water coated pigment in an oily ink vehicle without separation of the water.

Plate Making:

2,117,007. MACHINE FOR TRIMMING ELECTROTYPE OR STEREOTYPE PLATES. Ian Theodore Nelson and Robert Jack, Edinburgh, Scotland. Application November 4, 1937, Serial No. 172,752. In Great Britain May 14, 1936. 3 Claims. (Cl. 29—21.)

1. A machine for trimming the edges of printing plates, including, at a milling station, three rotary milling spindles spaced apart from one another and adapted to trim four edges of a plate fed through the milling station along a path including two components disposed transversely of one another, whereby two opposed edges of the plate are trimmed simultaneously in the travel of the plate along the first component, and the other two opposed edges of the plate are trimmed simultaneously in the travel of the plate along the second component, a pneumatic plate-holding clamp against which the plate is held by atmospheric pressure during the edge-trimming operation, a slide upon which the clamp is mounted and which travels along both components of the path of the plate, and a second slide which carries the first-mentioned slide along the second component of the path.

2,117,279. PHOTOENGRAVING EQUIPMENT. Samuel B. Anson, Cleveland Heights, Ohio, assignor to The Cleveland Shopping News Company, Cleveland, Ohio, a corporation of Ohio. Application April 10, 1937, Serial No. 136,147. 7 Claims. (Cl. 95—14.)

1. In an apparatus, a photo-engraver's copy-holder, lens system and grain screen, means for holding a sensitized element in exposure therebefore, an electric starter switch operated by discharge movement of the sensitized element holder, a motor and conveyor controlled by the switch, a developing tank for receiving the exposed sensitized element from the conveyor, a perforated plate to agitatively support the exposed element in the developing tank and finally discharge it, a motor for operating the perforated plate, a switch controlled by the conveyor motor equipment for starting the developing tank motor, a switch controlled by the developing tank equipment for shutting off the conveyor motor, a stopping tank to receive the exposed element from the developing tank, a perforated plate to agitatively support the exposed element in the stopping tank and finally discharge it, a motor for operating the stopping tank perforated plate, a switch controlled by the developing tank equipment for starting the stopping tank motor, a switch controlled by the stopping tank equipment for shutting off the developing tank motor, a fixing tank to receive the exposed element from the stopping tank, a perforated plate to agitatively support the exposed element in the fixing tank, and finally discharge it, a motor for operating the fixing tank perforated plate, a switch controlled by the stopping tank equipment for starting the fixing tank motor, a switch controlled by the fixing tank equipment for shutting off the stopping tank motor, a wash tank to receive the exposed element from the fixing tank, a switch controlled by the fixing tank equipment for shutting off the fixing tank motor, light-excluding cabinet housing about the means for holding the sensitive element and the developing, stopping and fixing tanks, and sight glass means for observation from the outside.

2,118,410. PLATE SHAVING MACHINE. William J. Lofstedt, Portland, Oreg., assignor, by mesne assignments, of two-thirds to Premier Manufacturing and Sales Company, Portland, Oreg., and one-third to Ralph H. Mort. Application March 7, 1936, Serial No. 67,687. 2 Claims. (Cl. 90—18.)

1. A plate shaving machine having in combination a vertically adjustable horizontally movable bed plate, a driving means for slidably moving the bed plate, side and end stops associated with the bed plate, a spiral cutter mounted over the bed plate, chip deflectors disposed along the cutter, an oiling roller disposed in advance of the chip deflectors and a trip arm disposed over the bed plate

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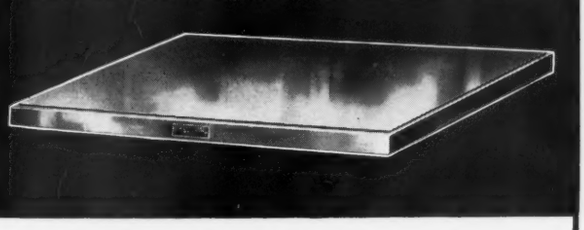

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Conco Press, Mendota, Ill.
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Typo Graphic Arts Company, Minneapolis, Minn.
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Mono-Trade Co., Minneapolis, Minn.
Beloit Daily News, Beloit, Wis.
Detroit News (5), Detroit, Mich.
Plymouth Pilot, Plymouth, Ind.
Essanel Press, Milwaukee, Wis.
Crittenden County Times, West Memphis, Ark.
Mono-Lino Typesetting Co., Toronto, Canada.
Mendota Reporter, Mendota, Ill.
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together with a clutch interposed between the drive mechanism and a source of power actuated by the trip arm whereby a plate of excessive thickness will cause the drive mechanism to move to a netrual position.

2,118,801. PROCESS OF FINISHING PRINTING PLATES. William H. Banzett, Clifton, N. J., Application August 13, 1937, Serial No. 158,948. 1 Claim. (Cl. 101—401.3.)

The process of finishing a duplicate relief printing plate having a plurality of lines of characters or the like on the printing face, and of the type made from a master mold; which comprises mounting the plate upon a true base and removing material from the printing face to correspond to the base, the distance from the printing face to the back of the finished plate being equal at all points.

2,119,041. REPRODUCTION PROCESS. Albert Carman and Jean Charlot, New York, N. Y. Application November 7, 1936, Serial No. 109,632. 3 Claims. (Cl. 101—211.)

1. A method for reproducing multicolor designs including the use of an offset press consisting in drawing with a lithographic pencil upon a printing plate those portions of a design which are to be reproduced in a desired color; placing the plate upon the offset press in printing position; applying an ink repellent to the plate; inking the drawn design upon the plate with such selected color and printing therefrom by contacting the offset cylinder of the press directly with the inked design upon the plate; removing the plate from the press; washing the plate to remove the inked design whereby a ghost picture remains upon the plate; drawing upon the plate such other portions of the design which are to be reproduced in another selected color using the ghost picture for guidance in drawing the portions which are to reproduce the other selected color; again placing the plate upon the press in printing position; again applying an ink repellent to the plate; inking the latter with such other selected color and printing therefrom by again contacting the offset cylinder of the press directly with the other inked design upon the plate and thereafter repeating the operations for each additional color in the design to be reproduced.

2,120,451. APPARATUS FOR CASTING STEREOTYPE. Paul E. White, Lancaster, Ohio. Application August 19, 1936, Serial No. 96,788. 8 Claims. (Cl. 22—4.)

7. A mold for casting stereotype comprising a plate against which the mat is adapted to be clamped, means for clamping the mat in position comprising a tail-piece mounted on the mold adjacent the inlet opening thereof and over which the molten metal is poured into the mold. and means besides the metal being poured for heating the tail-piece.

Printing Presses:

2,116,609. PRINTING PRESS. Wesley P. Shomaker, Richmond, Va., assignor to The Duplex Envelope Company, Inc., Richmond, Va., a corporation of Virginia. Application March 2, 1933, Serial No. 659,308. Renewed October 29, 1936. 28 Claims. (Cl. 101—91.)

1. In a device, impression and printing cylinders of different diameters, congruent intermeshing gears connected to the cylinders for rotating the same in unison, each gear being tangential to its cylinder at one point and the gears being so related to each other as to register the points upon rotation.

2,116,874. INTAGLIO PRINTING MACHINE. Joseph Barash, New York, N. Y. Application December 7, 1936, Serial No. 114,588. 3 Claims. (Cl. 101—157.)

1. In an intaglio printing machine a frame consisting of a base plate and a pair of spaced parallel vertical wall plates, an intaglio printing roller rotatively mounted between the wall plates, and a doctor blade engaging the intaglio roller, the doctor blade comprising a rod, a blade substantially radially supported upon the rod and having its free end engaging the intaglio printing roller, head members on the ends of the rod slidably engaging horizontal slots formed in the wall plates, resilient means urging the heads in one direction, and screws for holding the heads against the action of the resilient means.

2,117,032. DOCTOR MECHANISM FOR ROLLS AND CYLINDERS. Frederick W Lodding, Worchester, Mass. Application July 17, 1935, Serial No. 31,872. 4 Claims. (Cl. 92—74.)

1. In a device, a thin flexible blade providing a straight scraping edge, a holder for pivotally supporting the blade with the edge parallel to the axis of a rotating surface with which the edge engages, a member of greater stiffness than the blade carried by the holder for engaging the surface of the blade intermediate its edges, and means for shifting the blade engaging member within the holder at right angles to the edges of the blade to vary its zone of engagement with the blade.

2,117,546. MULTICOLOR PRINTING. Albert C. Dobroth, Jr., Louisville, Ky. Application October 3, 1936, Serial No. 103,863. 6 Claims. (Cl. 101—174.)

1. The process of printing three or more superimposed color impressions upon separate sheets of paper moving at a substantially constant rate of speed comprising, printing an initial color impression upon a sheet at a point in its path of movement relatively distant from the second color impression point and at a correspondingly large interval of time, printing a second color impression upon the initial color impression of the same sheet whereby the interval of time elapsing between the first and second impressions is sufficient to permit the initial ink to set and to allow the second ink impression to form a well-defined color graduation thereupon and then printing a third color impression upon the previous impressions and at a point in the path of movement of the sheet relatively near to the second color impression point and at a correspondingly small interval of time.

2,117,593. DAMPING ROLL FOR LITHOGRAPHING PRESSES. Fritz Backofen, Mittweida, Germany. Application December 13, 1937, Serial No. 179,511. 1 Claim. (Cl. 91—67.8.)

A damping roll for lithographing presses, comprising a seamless double weave interconnected woven material, joined integrally throughout in tube form with a substantial nap at the exterior and interior portions, and having a diameter substantially equal to the diameter of the lithographic roll to which the damping roll is to be applied and a length somewhat greater than the length of such roll, the nap being only on one side of a thread.

2,118,238. MULTICOLOR ROTARY PROOF PRESS. Ernest James Smith, Fleet Street, London, England, assignor to The Goss Printing Press Company, Chicago, Ill., a corporation of Illinois. Application September 29, 1934, Serial No. 746,054. In Great Britain October 2, 1933. 17 Claims. (Cl. 101—177.)

1. A multicolor proof press including in combination an impression cylinder to receive a proof sheet, a plurality of transfer cylinders, a plurality of plate cylinders for each transfer cylinder, means for securing printing plates on the plate cylinders in registering relation and means for inking the plates.

2,118,965. DEVICE FOR INTERRUPTING AND RECONTINUING THE PRINTING OPERATION OF CYLINDER PRINTING PRESSES. Arthur Buttner, Heidelberg, Germany, assignor to Druckmaschinen Aktiengesellschaft, Glarus, Switzerland. Application May 9, 1935, Serial No. 20,660. In Germany May 29, 1934. 3 Claims. (Cl. 101—247.)

1. A device for interrupting and re-continuing the printing operation in cylinder printing presses, comprising, in combination, with the impression cylinder, the bearings supporting it, adjustable supporting screws for the bearings and an upper adjusting screw for each bearing, the upper adjusting screws being connected to the bearings and each upper adjusting screw having a right-hand thread and a left-hand thread, one of the threads engaging the frame of the machine and the other thread engaging the bearing of the cylinder, the upper adjusting screws being adapted to lift and lower the bearings positively and to press the latter against the lower supporting screws, and means for simultaneously turning the upper adjusting screws.

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"FLECTO"
GUMMED BACKING FELT

Practical knowledge and research have combined, to produce this backing felt which is successfully used on all dry mats. Made in gauges .025, .030 and .035—sheets 18 in. by 24 in. and gauges .040, .045 and .050—sheets 18 in. by 22 in. Cut into strips without charge.

Free samples on request.

Do not be misled by similar-sounding names seeking to trade on the wide-spread acceptance of "Plate-tak" and "Flecto."

EASTERN NEWSPAPER SUPPLY
9603 NORTHERN BLVD. CORONA, N.Y.

Type & Press Temporary Offices

Shortly after moving into new quarters early in July, at 520 S. Canal St., Chicago, a fire which did considerable damage to the building made it necessary for Type & Press of Illinois to take temporary offices at 612 S. Canal St., where all business will be transacted for the present.

Type & Press had occupied quarters at 632 Sherman St., Chicago, for six years, but recently leased 12,000 sq. ft. of floor space at 520 S. Canal St., Chicago. The new space takes up the entire second floor of Parker Thomas and Tucker Building. Henry Spero had extended invitations to friends and customers to visit the new quarters and intended holding open house on the evenings of July 14, 15 and 16.

Hydraulic Paper Roll Truck

Here's a new one-man hydraulic paper roll truck. The Service Caster & Truck Co. tells how it works. The truck is rolled up to the paper roll and a swinging nose comes under the roll. A chain pin attached to truck by a chain is dropped in core in top of roll, anchoring roll to truck. The truck is "broken over" and the roll lifts from vertical position cleanly, with no crimping. Sinking backward, through hydraulic control, the load is on the truck, off the trucker. A heavy-duty lowering cylinder, controlling the iron platform support, brings the roll to horizontal position slowly, stopping at any desired angle through action of foot pedals at rear.

Roll truck frames are arc-welded durably into one piece, of hot-rolled, ½ in. steel. Load wheels, front, are 11 in. dia., 2⅞ in. tread, rear wheels are 6 in. unbreakable Forge-Welds and all turn over Hyatt bearings. *P-Double-E File No. 4D3.*

In this picture the trucker is shown lowering a paper roll from vertical position by means of a Service Hydraulic Paper Roll Truck. Foot pedals at the rear of the truck permit a hydraulic device to bring the roll slowly to horizontal position or stopping at any desired angle.

Illinois Mechanical Association Planned

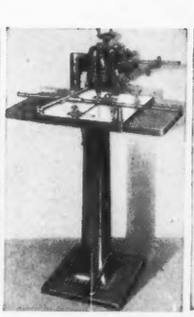
THE annual meeting of the Illinois Daily Newspaper Composing Room Executives association will be held in Chicago September 17, 18 and 19. Headquarters will be the LaSalle Hotel where all meetings will take place as well as the annual dinner.

The executive board of the association at a meeting early this spring voted to invite heads of stereotype and press rooms to join in the meeting. It is hoped by the board that the association will be reorganized in Chicago into a permanent Mechanical Association of Daily Newspapers in the state instead of confining the association to composing room heads.

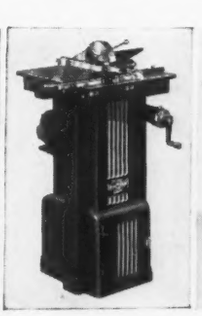
The officers of the association are: Lee Moore, Champaign *News-Gazette*, who succeeds John Cope who died November 29, without having presided over a meeting of the association. Mr. Moore was elected vice president last year. Earl E. Anderson, Rockford Consolidated Newspapers, Inc., secretary-treasurer; N. O. W. Johnson, Moline *Dispatch*, Verne Williams, Springfield *State Register*, and Herschel Baldwin, Peoria *Star*, are the directors.

Harry Pottle, Western Newspaper Union, is acting as chairman of the Chicago Committee.

Easy Kaster "8"
Model EK8 without pot
Model EK8-P with pot



Model R-3
Radial Router



Model G-3
Glider TrimOsaw

Model G-2F
Glider TrimOsaw

PRODUCERS....

All Hammond Equipment is built to produce with greater speed, ease, accuracy, economy and safety.

Make us prove it with our Proving Plan.

HAMMOND of KALAMAZOO
1604 Douglas Ave. Michigan

Leon Link To Plain Dealer

J. A. VanBuren, Business Manager announces the appointment of Leon A. Link as Mechanical Superintendent of the Cleveland *Plain Dealer*. He will assume his new duties on July 25. Mr. Link has been composing room superintendent of the Akron *Times-Press*. He is well known among newspaper executives in the Middle-West and has been active in the A.N.P.A. and Iowa mechanical conferences.

Exhibit Features Master Model Linotype

A feature of the Linotype exhibit at the A.N.P.A. Mechanical Conference in Toronto was a Two-in-One Master Model Linotype with a six-mold disk, a self-quadder and a Mohr Lino-Saw.

The machine was equipped for food-store advertising, and printed specimens on display in the exhibit demonstrated what could be done on the machine.

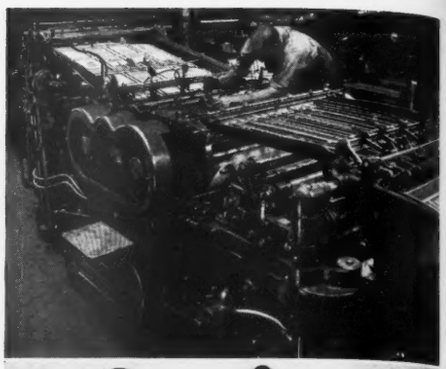
Among Mergenthaler representatives at the convention were Harry L. Gage, vice-president in charge of sales; R. R. Mead, head of the research and development department; C. C. Rhame, manager of the New York agency; Fred A. White, manager of the Chicago agency; Harry E. Reid, manager of Canadian Linotype, Ltd., and Mark H. Boynton, New England representative.

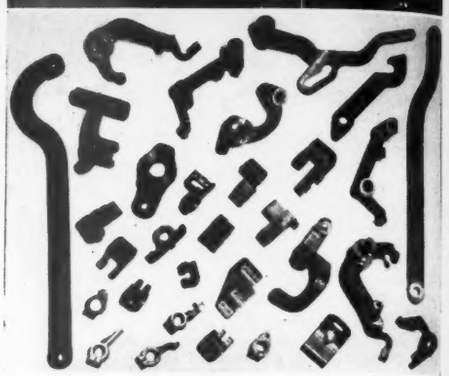
Ideal Moves in San Francisco

Headquarters of the Ideal Roller & Manufacturing Company on the Pacific Coast have been moved to 952 Folsom Street, San Francisco. Ralph Dickson, in charge of the West Coast Division, has found it advisable to occupy a larger space which will permit of better facilities for demonstrating and displaying Ideal products. Mr. Dickson took charge of the West Coast Division a year ago.

Many Malleable Iron Parts Used in Press

The Miller Printing Machinery Co, announces several improvements and reports the increased use of malleable iron castings in its line of automatic printing presses. At top in illustration is shown a two-color press, which is being tested and inspected prior to shipment. In the lower section of picture are shown the principal malleable iron parts used in applications subject to repeated vibrations and stress. The press represents an assembly of over 4,000 parts and is an example of modern precision manufacture, requiring streamlined design and close tolerances for all parts.





New England Distributor

J. H. Hennessey, well known New England printers and pressmen, has just been named New England Distributor for the E. J. Kelly Company, printing ink manufacturers. Mr. Hennessey will maintain an emergency stock at 142 Oliver St., Boston.

Giles Gets More Territory

Frank Giles, Intertype salesman in North and South Carolina, recently has had his territory enlarged to include Washington, D. C., and large portions of Virginia and West Virginia. This territory was formerly covered by Win Smith.

Champion Blacks

WIN ON MODERN HIGH SPEED PRESSES

- CHAMPION HALFTONE—A non-scratch dense black which will not offset. Can be backed up in two hours.
- CHAMPION SUPER—Fully toned, free flowing, this black will work clean and sharp on super papers.
- CHAMPION BOOK—A high grade ink with good density, it will not shadow through on standard grades.

Sinclair & Valentine Co.

HOME OFFICE

603-611 West 129th Street, New York, N. Y.

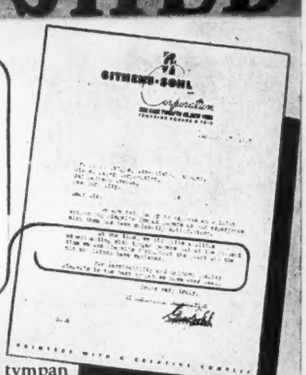
BRANCH OFFICES

Albany	Dallas	Philadelphia	Nashville
Boston	Dayton	Jacksonville	Kansas City
Baltimore	Cleveland	Miami	San Francisco
Chicago	Los Angeles	New Orleans	Seattle

COMPLAINTS VANISHED

At one time, we did quite a little experimenting with tympan papers but at the present time we use Riegel's throughout the plant and the old complaints have vanished.

For serviceability and uniform quality Riegel's is the best tympan we have ever used.



CERTIFINE — A low-priced tympan with a hard, even surface and exceptional strength. Ideal for short-run job work. Nationally stocked in roll widths for every press.

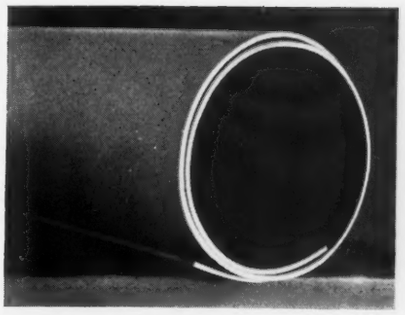
TREATED JUTE—The old reliable. Its tough jute fibres stand up under the longest runs. Stocked in roll widths for every press.

DRUMHEAD — Save time, temper and money with this ready-cut and scored topsheet of the finest treated jute. Sold by leading paper merchants in sheet sizes for high-speed presses only.

CLIP THIS AD For Free Trial Sheets. State Size and Press.

RIEGEL TYMPANS

RIEGEL PAPER CORP., 342 MADISON AVE., NEW YORK, N. Y.



Uniform Blanket Thickness promotes uniform printing

UNIFORM THICKNESS is an outstanding feature of all Vulcan Press Blankets. In fact, Vulcan Blankets are actually made to closer tolerances than the metal cylinders to which they are applied. Naturally, uniform press blanket thickness promotes uniform presswork . . . particularly in combination with the lasting resilience of Vulcan Blankets. Write for information about Vulcan Felt and Non-Felt Newspaper Blankets, Underpackings, and Draw Sheets.

VULCAN PROOFING COMPANY
FIRST AVENUE AND 58th STREET, BROOKLYN, N.Y.

Vulcan
PRESS BLANKETS

BOTTLENECK HAS BEEN ELIMINATED

Unqualifiedly Recommend Rouse BAND SAW

Stevens Point Daily Journal
STEVENS POINT, WISCONSIN

H.B.Rouse & Co.,
2214-16 Ward St.,
Chicago, Illinois.

Gentlemen:

The Model 2 ROUSE Band Saw which we installed in our plant last March was purchased for the very definite purpose of eliminating a "bottleneck" that had developed around the composing room saw we had been using.

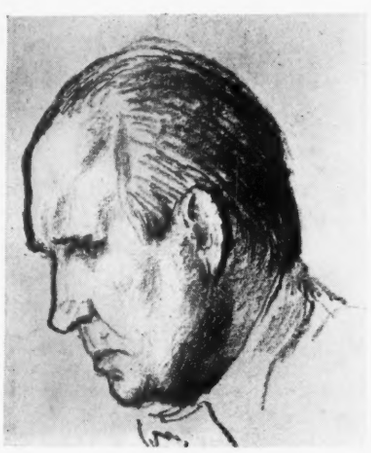
Our expectations have been more than fulfilled. The bottleneck has been eliminated, sawing time has been reduced to a fraction of what it formerly was, the machine is practically trouble-free. We have made but one change of saw blades since the machine was installed.

We could not conscientiously do otherwise than to unqualifiedly recommend the ROUSE Band Saw to any plant seeking the fastest and most efficient system of sawing type lines and spacing material.

Yours very truly,
JOURNAL PRINTING CO.
GUY W. ROGERS

Send for circular showing how slug lengths are automatically selected, and a full galley of slugs cut to variable measures in 35 seconds. Write NOW.

H. B. ROUSE & CO.
2216 N. Wayne Ave., Chicago, Ill.



Portrait drawing of Warren Chappell, type designer who created Lydian and Italic *for ATF.*

ATF Lydian and Italic

The latest type offering by American Type Founders has struck a new note. With familiar sans serif letter forms as a basis, Warren Chappell has developed a broad pen-letter that retains the simplicity, read ability and usability of the popular sans serifs, adds to them the grace traditional to the best calligraphy.

This is LYDIAN
LYDIAN ITALIC

Lydian Italic is a slanted roman rather than a conventional italic. Where most italics depend upon flow for their movement, Lydian Italic gets its movement from a quick repetition of diagonals.

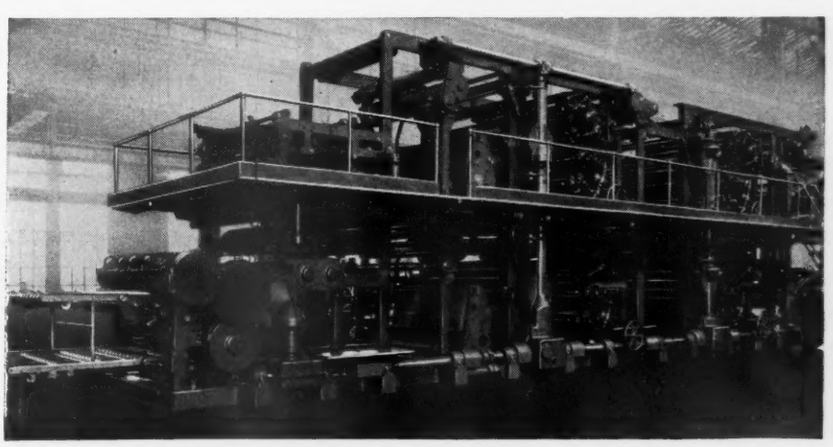
Lydian and Lydian Italic are the first cuttings of designs by Warren Chappell, a young American who has gained a wide reputation for his lettering, wood cuts and book illustrations.

Both Lydian and Lydian Italic, have been cut in twelve sizes ranging from 10 to 96 point. A comprehensive specimen folder is in preparation, but advance showings are available on request to any of the American Type Founders branches.

P-Double-E File No. 1EE5.

Hewitt Passes

Erskine Hewitt, one of the directors of Intertype since its organization in 1916 is dead. Mr. Hewitt was born in New York City, January 12, 1871, and was active in industry until his sudden passing on May 22.



Installs Rotary Magazine Press

Regensteiner Corporation of Chicago, is now installing its now 64-page Rotary Magazine Web Perfecting Press, recently shipped from R. Hoe & Co's plant in New York. When running at the Regensteiner plant, the new press will be used chiefly for printing *Esquire* magazine. This new Hoe press is equipped with superfine ink distribution, solid steel printing cylinders, anti-friction bearings, helical gears, spiral mitres and dryers developed chiefly for printing work at high speeds with the recently introduced high-speed inks.

BLACKER BLACKS

One thing that many Stereotypers like about FLEX dry mats is the way they reproduce black type and heavy solids. Advertisers, too, like this feature of FLEX dry mats . . . and they also like the way these mats bring up halftone and Ben Day pictures. ● For blacker blacks and better pictures . . . for cleaner news type, with less breaking down of weak slugs . . . use FLEX dry mats. Samples will be sent to you . . . without charge, of course, and without obligation on your part . . . on request. Please specify gauge, shrink, number of casts, and type of equipment, and address Flexideal Dry Mat Company, 21 West Street, New York.

FLEX DRY MATS

FOR BETTER FLAT CASTS

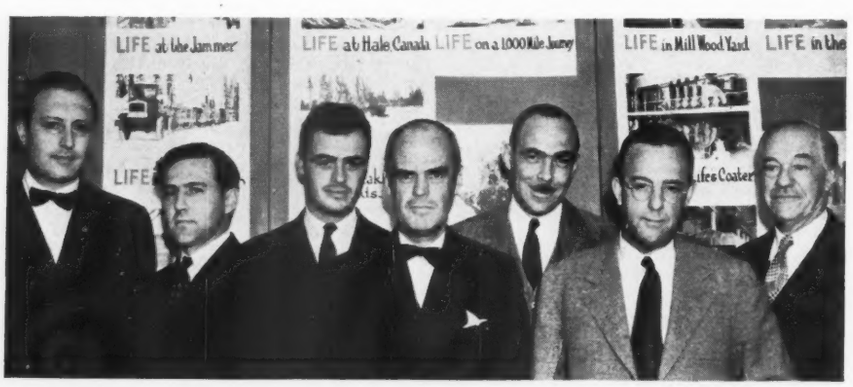
PREPARE YOUR MATS TO THE HIGHEST STATE OF EFFICIENCY WITH THE

MODEL "F"

FORM-O-SCORCH

AMERICAN PUBLISHERS SUPPLY

Box 131 **W. Lynn, Massachusetts**



Picture of Life Magazine *officials on a visit at Wisconsin Rapids, Wis., to inspect new paper machine constructed by Consolidated Water Power and Paper Co. to be used exclusively in manufacturing coated paper for the picture magazine. What is claimed to be the largest coated paper contract ever made in this country has been given by* Life *to Consolidated and it will take the entire capacity of the new machine, which is 127 in. wide, and large production from other machines at Consolidated mills to fill the contract.*

Reading from left to right are Charles D. Jackson, General Manager of Life; *Charles L. Stillman, Treasurer of Time, Inc., publishers of* Life; *Charles Barton, Secretary of Rice, Barton & Fales, paper machine manufacturers of Worcester, Mass., and George Summer Barton, President; Nicholas L. Wallace, Production Manager of* Life; *Earl E. Barry, Chief Engineer of Beloit Iron Works, and George W. Mead, President of Consolidated.*

Life's coated paper is produced through the new invention owned by Consolidated, whereby paper is formed, dried, and then coated all in one operation on the paper machine. Consolidated now has six paper machines equipped with this invention.

Salaries Increased

C. G. Milner, General Manager, Flexrock Company, Philadelphia, has announced a general pay increase for all employees. A sharp upward trend in Flexrock's principal product (a surfacer for concrete floors), 64% above sales for May 1937 is cited as the chief reason.

Mackey Sails for Europe

Joseph T. Mackey, president of the Mergenthaler Linotype Company, sailed for Europe on the S.S. Bremen June 15.

He will attend the annual business meetings of Linotype organizations in England and other European countries, and will study recent developments in the graphic arts in the various cities to be visited.

Equipment Sales

Orders Hoe Equipment

The Richmond *Times-Dispatch* recently placed an order for a latest-design Hoe double-octuple Super-Production Press together with two Hoe Super-Production Folders and Hoe three-arm Reels, with Hoe electrically-controlled automatic Tensions.

Among recent orders below the Mason-Dixon Line were those from Asheville *Citizen-Times*, Charlotte *Observer*, Greenville *Piedmont-News*, New Orleans *Times-Picayune*, Raleigh *News & Observer*, Richmond *News-Leader* and Spartanburg *Herald-Journal*.

Recent Linotype Installations

Linotypes recently have been installed by the Woodland (Calif.) *Democrat*; Segal Press, Cincinnati, O.; Pacific Manifolding Book Company, Inc., Emeryville, Calif.; Houston Printing Company, Dothan, Ala.; Buffalo Center (Ia.) *Tribune;* Johnson Printing Company, Montgomery, Ala.; Frederick H. Lutz, Brockton, Mass.; Georgetown (O.) *News-Democrat;* Hudson Falls (N. Y.) *Herald;* Ryder Printing Company, Portland, Ore.; Centralia (Wash.) *Daily Chronicle;* Oakland Type Foundry, Oakland, Calif; Lord Baltimore Press, Baltimore, Md.; Courier Press, Louisville, Ky.; *Daily O'Collegian*, Stillwater, Okla.; *Sentinel-Record* and the *New Era*, Hot Springs, Ark.; A. R. Buckingham & Son, Chicago; Superior Print Shop, Paso Robles, Calif.; Vancouver (B. C.) *Daily Province;* Sackville (N. B.) *Post*.

Brand-New Technical

Literature

Gratis Except Where Noted

Send your request to Printing Equipment Engineer.

New Quality and Economy

Two bulletins published by Frazier Processes, Inc., describe use and benefits to be derived from Frapomist device for printing presses, for commercial, rotary and newspaper printing.

Printing Sales Are Up—What About Profits?

Illustrated folder states business is in a state of transition, argues adaptability of Miehle Vertical to help meet those conditions. Advantages, features and specifications of press are given.

Klean-O-Mat News

Four pages, illustrated, folder describes Klean-O-Mat improved process and equipment for cleaning matrices and magazines on line-casting machines.

New Abridged Catalog

Elwell-Parker Electric Co., has just issued a handy pocket-size 32-page booklet, illustrating the leading types and models of Elwell-Parker trucks, tractors and cranes. Printed on heavy paper in attractive colors, the illustrations show clearly the mechanical details of the various machines.

How to Run a Lathe

The well-known machinist's manual, "How to Run a Lathe," in a new 34th edition, has just been announced by the publishers, the South Bend Lathe Works, South Bend, Ind. The new edition has been completely revised. The new book has 128 pages and contains over 350 illustrations, showing practically every type of lathe set-up, and methods for handling all important machining operations. Copies are 25c each, postpaid. Stamps or coin accepted.

Precision Vulcanizer

Illustrated four-page folder describes Heinrich Precision Electric-Hydraulic Vulcanizer for making rubber printing plates.

Non-Wobbling Ball-Bearing Wheels

It has been announced by Davidson Perforator Corporation that a new non-wobbling, non-sticking ball bearing wheel is now being furnished for rotary press perforators-scorers-slitters. The addition of the frictionless bearings has been accomplished without changing the size of the older type wheel. The new style wheel may be added to outstanding units.

P-Double-E File No. 5FF.

New Fast-to-Light Color

A new color for use in the printing-ink, lake and allied industries is announced by the du Pont Company in "Monastral" Fast Green GS, a straight, unshaded pigment which produces bright emerald shades of green. It possesses the same fastness to light, alkali, acids and lime as the older product, "Monastral" Fast Blue BSN. It is non-bleeding in oil, water and alcohol.

Extra Protection

Illustrated Folder—Describes precautions taken by Norma-Hoffman Bearings Corporation to insure users receiving bearings in proper condition and the pains taken to insure proper grease for the bearings. Two features adopted by the company after long research.

P-Double-E File No. 5C.

Perforators-Scorers-Slitters

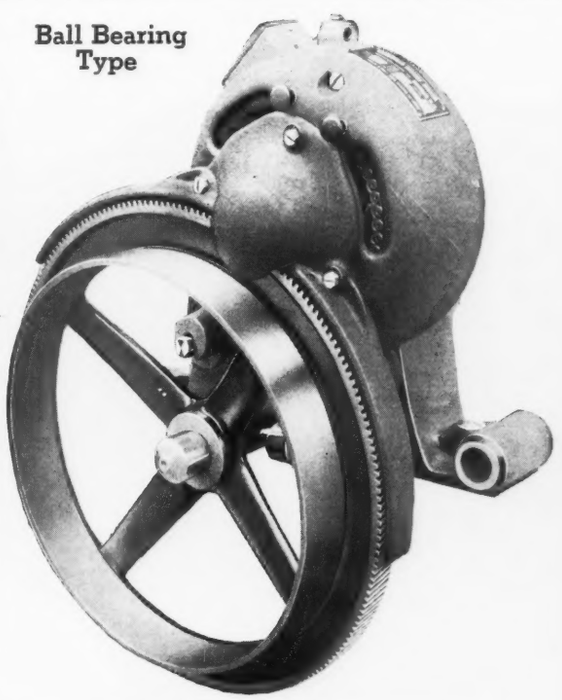
Small Folder—Announces non-wobbling ball-bearing wheels for Davidson Perforator Corporation's perforators-scorers-slitters which are compensating and micrometer adjusting. Cross cylinder and platen press perforator-scorer is also illustrated.

P-Double-E File No. 5FF.

Theory of Vibration Control

Reprint of paper presented by S. Rosenzweig, President of The Korfund Company, before the American Society of Mechanical Engineers, Dallas meeting, June 7, 1938. Covers subject of machinery vibration transmission and its elimination, both from a theoretical and practical standpoint. Profusely illustrated with photographs, engineering drawings and sketches. *P-Double-E File No. 8K.*

Ball Bearing Type



The CUSHMAN OFFSET MOTOR will operate your typesetting machine at its maximum capacity with less operating cost than any other typesetting machine motor. Liberal trade-in allowance on all motors. Investigate today.

CUSHMAN ELECTRIC CO.
65 S. Main St. Concord, N. H.

How to Solve Routing Problems

Style A

Having trouble with your routing bits? Do they require frequent sharpening—is your breakage too high? Then investigate the Onsrud special alloy high speed steel routing bit. It holds its edge longer—requires less frequent sharpening—is longer lived. Its clearance is produced differently from ordinary cutters, thereby giving it greater cross section and strength. Our skilled engineers will assist you in solving router and bit problems. Send for free samples.

Among our users—the Chicago Daily Tribune, Chicago Daily News, Chicago Evening American, Chicago Herald and Examiner, W. F. Hall Company, R. R. Donnelley Company, and Rapid Electrotype Company.

ONSRUD MACHINE WORKS
3932 West Palmer St., Chicago, Illinois

Style E

TINGUE
PRESS BLANKETS
Keep Your Presses Productive! Save Make Ready Time!
TINGUE on Press Blankets guarantees Superior Printing Qualities
TINGUE PRINTING PRESS BLANKETS
are guaranteed to give superior printing
. . . at low production costs . . .
TINGUE, BROWN & CO.
118-120 East 25th St. 1227 Wabash Ave. 723 East Washington Blvd.
NEW YORK N.Y. CHICAGO ILL. LOS ANGELES CAL.

Printing Press Controllers

Bulletin No. GEA-2863—Illustrates and describes remote preset-speed printing-press controllers from 7½ to 30 h.p. for a.c. and d.c. current.

P-Double-E File No. 5CC.

Ten Hoe Features

Illustrated Folder—Describes principally 10 mechanical features of Hoe arched-type superproduction newspaper press.

P-Double-E File No. 5LL25.

Teletypesetter

Catalog, 8½ in. by 11 in. illustrates and describes Teletypesetter tape-punching and keyboard operating equipment for line-casting machines.

ENS Catalog

New catalog has just been published by Eastern Newspaper Supply. Shows equipment and supplies for composing, stereotype and pressroom.

Linograph "50"

Illustrated Catalog—Consists of 24 pages, 8½ in. by 11 in. Describes mechanical features of Linograph "50" line-composing machine.

P-Double-E File No. 1G.

Beat That Deadline

Chemco Photoproducts Co.'s new catalog illustrates and describes Chemco Stripfilm Roll Camera and other photoengraving equipment.

Dramatizing News Type Installation

Booklet—Miniature illustrations and explanatory text show how Buffalo *Times* prepared the public by a series of feature articles for it change in body type to Intertype Regal News Type. *P-Double-E File No. 1G5.*

Individualized Matrices

Folder—Illustrates and describes matrices made by Ross-Adseal, Inc., of any special design such as ornaments, trade marks, emblems and signatures for use on Monotype, Intertype, Linotype, Ludlow and line-casting machine border blocks.

Engraving Bits

Folder—Illustrates router bits, length and shape, style, use and size together with prices. Published by Onsrud Machine Works. Type F-3-B air-operated routing head is also illustrated and described for photo-engravers and stereotypers.

Bauer Text

Folder—Shows sizes of Bauer Text from 8 pt. to 72 pt. A few specimen settings to show how to use this new foundry type face are included.

P-Double-E File No. 1EE5.

Ruskin Twin Finish

The second of series of folders dealing with the Pennsylvania tradition of paper-making as exemplified by the work of the Brothers of the Ephrata Community, has been issued by The D. M. Bare Paper Company. Folder contrasts the old method of printing with modern printing production at high speed.

P-Double-E File No. 3E.

Rubber Items for Printers

New Illustrated Catalog—Mechanical goods products manufactured by The Goodyear Tire & Rubber Company is of interest to all users of many widely used items as belting; air, water, welding, steam and all other types of hose; printers' supplies, molded and lathe cut goods. Of particular interest to mechanical executives are the pages 45 and 50 in which are listed items like rubber ink rollers, litho and gravure rollers, blankets, cutting rubbers and printing gum. Catalog can be obtained by addressing request to The Goodyear Tire & Rubber Company, Akron, Ohio.

Tingue Printing Press Blankets

Price List—Booklet contains swatches of Tingue, Brown & Co.'s principal press packings with price list. Size, 3½ in. by 6¼ in. *P-Double-E File No. 5L.*

Newspaper Foundry Practice

Booklet—Describes newspaper foundry practice with Certified Dry Mats. Molding, packing, scorching and casting are discussed.

Creates New Position

Public Printer A. E. Giegengack has announced the creation of the office of Administrative Assistant to the Public Printer effective as of June 1, 1938. To this new office he appointed Mr. Russell H. Herrell, a member of the Washington Club of Printing House Craftsmen, who, for the past three and a half years, has been the Comptroller of the Government Printing Office.

The Administrative Assistant will be responsible to the Public Printer for the propehandling of all personnel, legal, and purchasing matters, and for the accounting work of the Government Printing Office.

Technical Books

ETCH PROOFS
By J. H. Bartz

Booklet, approx. 6 in. by 9 in., 40 pages and paper cover. Tells reasons for and how to take reproduction proofs. Price, $2.00, cash with order.

ADVERTISING *and* PUBLISHING PRODUCTION YEARBOOK
Fourth Annual Edition

General collection of technical articles related to all phases of printing, newspaper production and publishing. Supplies answers to 17,760 production problems. Price, $5.00, cash with order.

HANDBOOK *for* PRESSMEN
By Fred W. Hoch

Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts. $3.00 per copy, cash with order.

The PRACTICE *of* PRESSWORK
By Craig R. Spicher

We offer copies to our readers at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).

MANUAL *of* STEREOTYPING
By Joseph Goggin

This 256-page book conveys latest technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.

Send All Orders With Remittance to

Printing EQUIPMENT *Engineer*
1276 W. Third Street Cleveland, Ohio

Have the Salesman Show You the AIR PUMP on the Feeder You Buy

Leiman Bros. Patented Rotary
AIR PUMPS

The printers' air pump for all feeders—patented positive air pumps for blowing and vacuum pickup—rotation counter clockwise scoops up the air—they take up their own wear—last a lifetime—many sizes.

FOR PRINTING FRAMES; LINOTYPE COOLING

LEIMAN BROS., Inc. G-23 WALKER ST. New York City
MAKERS OF GOOD MACHINERY FOR 50 YEARS

FOR DEPENDABLE MAKEREADY PROTECTION

Buy and Specify
CROMWELL
SPECIAL Tympan PREPARED Paper

THE CROMWELL PAPER CO.
4801-29 S. WHIPPLE ST. CHICAGO, ILL.
47-15 PEARSON PLACE LONG ISLAND CITY, N. Y.

Rambling Reporter

(Continued from Page 12)

Electric Company. A blind man would have known that the United American Metals Corporation was on the job, because every so often we would hear a pig of metal being dumped out of the mold being demonstrated. Immediately in front of the entrance to the exhibit was the Linograph Corporation exhibiting its new model machine. C. E. Murray seemed well pleased with the attention his exhibit was getting.

Met William Herrick of the Wm. Herrick Ink Company, who told us the current recession meant little or nothing to his company. Congratulations, Mr. Herrick. Ray Johnson and Carl Mason did the honors for the Klean-O-Mat booth. This is another display that drew quite a bit of attention.

Among other booths which we took particular note of was the Temperature Controlled Sink of the Electro Hydraulic Equipment Company, where Tom Rawling did the demonstrating.

The Eastman Kodak had its usual good display as did also Arthur H. Gaebel. The Linotype Parts Company's booth was right next to us, with I. Bendow in charge. He was certainly a busy man.

John King held forth at the display of the Ludlow Typograph Company, although this year we missed Douglas C. McMurtrie. The Harold M. Pitman Company and the R. R. Robertson Company, manufacturers of engraving supplies and equipment, both had excellent displays of their products.

One of the most interesting booths was that of the Stahi Newspaper Supply Co. The miniature model Stahi Form File and the plate-matching machine are interesting mechanisms. The booth was in charge of Al Cochran and he certainly was on the job.

Rambling around at a Conference like we did, one was bound to run into a lot of people, who were not exhibiting, but who had rooms at the hotel. For example, the following men were very much in evidence: Captain A. T. Mann, of Intertype Corporation; Arthur Thompson of the Geo. H. Morrill Co.; Charlie Stout, of Matrix Contrast Corporation; Bill Coyne, of Coyne & Paddock; Geo. Watrous, of the Duplex Printing Press Co.; Carl Nelson, of General Tire; A. A. McNab, of Flint Ink Company, as well as the Flint Brothers: William C. Hart; R. C. Corlett, of The Goss Printing Press Co.; G. M. Norton, of the Norton Moulder Blanket Co.; Walter Morey, of the Teletypesetter Corporation.

There were a number of equipment and supply men that we know were there, but didn't contact. The following concerns had representatives on duty and we hope to meet them at the next Conference: E. W. Blatchford Company, Dayton Rubber Mfg. Company, Duplex Printing Press Company, Wood Flong Corporation, Rolled Plate Metal Company, C. M. Kemp Mfg. Co., The Challenge Machinery Co., Webendorfer-Wills, Chemco Photoproducts Co.

Impression Pete

(Continued from Page 30)

Well, sire, when that was settled, someone sez: "Do enny of you boys get a drip-off onto the distributor rollers from pump fountains?" and gosh, do they argue!

Some sez if you set the rail close you won't get it, some others sez if you set it away you won't get it; some of 'em sez you won't get it no matter what way the rail is set, and some others sez you will get it no matter what, but the real solution seemed to be to hold to a light consistency of ink and increase the distribution area as much as possible and then the drip won't show on solids.

The next subject which had to do with discrepancies between the mail and pressroom counts started the orators all over again. Well, sir, Walt himself in the chair told of two jobs he had been on, one of which lost 6000 papers on the Home edition each day and the other would lose twice that on the Sunday issue. Well, the boildown on all of it was that the remedy was to keep the mailroom isolated from all but the workers and insure accuracy between the mail and pressroom by having two or more registers per press. Count each paper actually spoiled in the pressroom and print a good one for it and then check at the dock the actual amount of papers leaving the mailroom each edition. In one case, a detective agency was called in and found that bundles marked "100" would contain more than that amount and showed an inside worker was doing it. This was easily stopped.

After all these good times and instructive debates there came a topic that certainly cast a mist of sadness over the gathering. When all the pressmen had everything settled to their satisfaction and Chairman Kauffmann took the gavel to adjourn the convention he announced that this was his last attendance as Chairman of the A.N.P.A. Mechanical Committee as he had resigned. Then everyone who was so happy a moment before were now sad, for Sam (you cain't call him Mister) is a gentleman, a scholar and a student of the other fellow's feelings which he never, never hurts. He made our Mechanical Committee what it is and we will all miss him, both in a sentimental way and what is more vital, in an executive capacity. So Long, Sam—not goodby—and good luck to you always.

About this time I felt so dern full of new knowledge that I just went out and climbed into the old Ford and headed home, thankful that my boss had been so nice as to let me come.

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Type & Press of Illinois
520 South Canal Street Chicago

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Reg. U. S. Pat. Office $1.80 Doz. 50c set of 3
Made Only by Originator. All Dealers.
We Make Gauge Pins, Gauges, Gripper Fingers, Etc.
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GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

MONOTYPE GIANT CASTER FOR SALE
Five molds, 61 fonts of mats. Casts type 42 to 72 pt. or hollow spacing furniture 3 pica, 4 pica and 6 pica. Cash or terms.
MINER & SHIPLEY, Inc., 353 E. Ohio St., Chicago, Ill.

Development

(*Continued from Page 13*)

mounting base by means of the usual register hooks.

With the use of proper rubber cements, molded rubber printing plates can be mounted accurately on blocks of cherry wood, solid lead, birch wood or on blocks of 5-ply laminated birch wood, to type-high standard (0.918 in.), or to any desired lower height, for printing on either flat-bed cylinder presses or platen presses. One make of rubber cement is made especially for mounting rubber plates on wood base, while another make is excellent for mounting rubber plates on solid lead base or any other metal base.

All the modern kinds of precision molded rubber plates, for single-color and multi-color printing, can be made on a special precision improved electric hydraulic vulcanizer. This machine is built in two platen sizes, viz: 24 in. by 24 in. and 18 in. by 18 in. Precision molds for making the molded rubber plates are produced on the same machine. These molds can be made from any style of original metal plate, including line engravings and halftones, and from all kinds of type composition forms. Available for use with these molds are the various grades, Durometer hardness, and thicknesses of unvulcanized sheet rubber, to provide for the desired soft, medium-hard or semi-hard molded and vulcanized rubber plate, according to the specific purpose of each original form.

Among the features of the vulcanizer is the plate-thickness indicator gauge which shows the exact intaglio depth of each mold or rubber plate being made. In addition to the indicator gauge, a set of steel thickness bearer gauges is furnished, all of them based on one-thousandth-of-an-inch measurements. These steel bearers not only prevent the upper and lower platens of the vulcanizer from being forced too close together when molding, but they can be arranged on the lower platen in such a manner as to predetermine the correct depth of molds made from type-high forms of composition, original photo-engravings, electrotypes, etc.

In like manner, with the use of the bearer gauges, molded rubber plates of any desired depth can be produced, as (for example) in the case of an extra high relief plate of the kind used in printing stock for corrugated and solid fibre shipping containers. Molds of just the right depth are made from original halftones, fine line engravings, and forms of small sizes of type. When required, extra thick molded rubber plates are made simply by placing two or more sheets of unvulcanized rubber together over the face of the mold and fusing the sheets of rubber together in the vulcanizing process. In practically the same way, "non-stretch" molded plates for close-register color printing are made, except that a sheet of special fabric, impregnated with rubber compound, is inserted between two rubber sheets before the molding and vulcanizing operation.

Another feature of the vulcanizer is the thermostatic control which keeps the temperature constant at all times. The temperature control is automatic, the thermostat turning on the electric current and shutting it off, without attention from the operator. There are fifteen electric heating elements in both the upper and the lower platens of the vulcanizer.

Accurate timing on the vulcanizer is controlled by a special alarm clock.

The utility of first-class rubber printing plates is well-known to users in the paper converting and specialty printing industries, who make the following claims: Excellent results and coverage of inks are obtained on the roughest as well as the smoothest stocks. There is a saving of 50% or more in ink consumption. On account of the thin film of ink applied to stock, the ink dries approximately 50% faster than ordinarily, practically eliminating ink offset. Kiss impression in the printing saves wear on the plates, and the light impression naturally increases life of the printing press. Makeready is negligible, and in many cases is unnecessary. Smash-ups from buckled sheets and loose plates are eliminated. There is no possibility of perforation or embossing the back of a printed sheet. There is splendid coverage of ink on solid printing areas, and clear printing of the small type. Less ink, kiss impression printing and quick drying permits high press speeds.

New Foundry Type Face

The Bauer Type Foundry, Inc., has announced a new body type which has been named "Bauer Text." The series consists of eleven sizes ranging from 8 pt. to 48 pt., with

BAUER TEXT
new body type

five sizes of initials ranging from 30 pt. to 72 pt. Bauer Text is a conservative type face, states its sponsor; it is a clear, open letter of even gray tone and is extremely easy on the eyes. It combines well with Legend or almost any other modern script letter.

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Technical Information and Literature

FOR PRODUCTION AND MECHANICAL EXECUTIVES ONLY

For Your Convenience—Circle the numbers on the convenient postage-paid return card, supply your name, title and company address and mail—we do the rest. Manufacturer or supplier will send you information or literature about equipment or supplies advertised in this issue. This card saves you time and postage—Keep Informed.

COMPOSING ROOM

1 GALLEY CABINETS—"Strong, sturdy, efficient cabinets for every need." Three shown by the Hamilton Mfg. Co., on page 29. Will send full information on request. Use the return card. P-Double-E File No. 1E.

2 COMPOSING MACHINE—Descriptive booklet on the new Linograph "50" will be sent on request. See page 29 for illustration and description. Manufacturer asks you to "Get acquainted with the most flexible combination machine ever offered." P-Double-E File No. 1G3.

3 IMPOSING SURFACES built by Challenge and featured on page 41 "are smooth, level and accurate." Additional information and prices on this "dependable, cost-reducing equipment" will be mailed on request. P-Double-E File No. 1Q.

4 COMPOSING MACHINES—Mergenthaler Blue Streaks—See inside front cover—"Efficiency figured to a fine point. Optic aid front conceals moving parts—reduces errors." Complete information sent on request. P-Double-E File No. 1G3.

5 MAGAZINES—New free catalogue—"Improved design magazines for standard models of linotypes and many other replacement parts, accessories and repairs described in new free catalogue."—Montgomery & Bacon. P-Double-E File No. 1G9. Circle No. 5 on return card.

6 MATRIX CLEANING SERVICE—"Many newspaper and commercial plants are installing the Klean-O-Mat process to keep their line casting machines in peak condition at minimum cost." Will send complete information. File No. 1G6.

7 COMPOSING MACHINE—Intertype's "new two-letter display matrices make possible the use of one font and one magazine where two were previously needed to produce the same faces." Write for advance specimens. File No. 1G3.

8 BAND SAW—Will send circular showing how slug lengths are automatically selected, and a full galley of slugs cut to variable measures in 35 seconds. Use the return card. H. B. Rouse & Co. P-Double-E File No. 1Z.

9 ELECTRIC PROOF PRESSES are shown by Vandercook on the inside back cover. Special features are listed. Complete information will be sent on request. Investigate now. File No. 1V.

10 In the LUDLOW SYSTEM—Spaces and quads are contained in a small case, in the front of the cabinet. It will hold a complete set of spaces and quads. Write for further facts. Page 5. P-Double-E File No. 1G.

11 HEATING UNIT for linotype pots replaces two elements now in use. "Heats quickly—lasts longer—easier to install—heavier protective casing, and other features." Descriptive circular on request. P-Double-E File No. 1G9.

12 SAW TRIMMERS—Milwaukee's No. 3-A Saw Trimmers are "precision built and function the same—outperforming others." Descriptive literature sent on request. Some users listed on page 41. P-Double-E File No. 1Z4.

13 COMPOSING MACHINE—"Almost without exception plants in which a Monotype has been installed have found the advantages of Monotype operation and typographic material to be sources of better service to clients." Will send further facts. P-Double-E File No. 1G3.

14 Improved EJECTOR BLADE CONTROLLER featured on page 33 by the Linotype Parts Co. Further information sent on request. P-Double-E File No. 1G8.

15 KEYBOARD ROLLS—Booth's green rubber keyboard rolls are functioning dependably on many Linotype and Intertype composing machines. See page 37. P-Double-E File No. 1G9.

16 SAWS—Glider Trim-O-Saws illustrated on page 43 by Hammond. Investigate the proving plan. P-Double-E File No. 1Z.

STEREOTYPE DEPARTMENT

17 FORMERS—"The Sta-Hi Autoformer accomplishes quality with economy, in the reduction of newsprint widths." See page 3. Further features will be sent to you. Use the return card. P-Double-E File No. 2G12.

18 DRY MATS—"Let Burgess Chrome Mats assist you with your shrinkage problem. Ask for demonstration." Use the return card. P-Double-E File No. 2G18.1.

19 ROUTER and CASTER—Hammond Radial Router and Easy Kaster, shown on page 43, "are built to produce with greater speed, ease, accuracy, economy and safety." Investigate proving plan. P-Double-E File Nos. 2G31 and 2G7.

20 MATRIX PRESS—"Positive pressure control, automatic pressure drop, suction device, high speed—these and other Directomat features will interest you." Will mail complete information on performance and economies. P-Double-E File No. 2G10.

This card must be filled out completely in order to secure the literature or information you request. Please circle only bulletins you particularly want.

PRINTING EQUIPMENT ENGINEER **July**

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
41 42 43 44

PRINT YOUR NAME AND ADDRESS

NAME.....TITLE.....DEPT.....

FIRM NAME.....

STREET CITY STATE

21 DRY MATS—"Try Certifieds. Many stereotypers recommend them heartily. Sample sheets sent on request. You may want to use them exclusively some day." Use the return card. P-Double-E File No. 2G18.1.

22 MAT SCORCHER—See the Form-O-Scorch on page 46. American Publishers Supply will send literature on request. P-Double-E File No. 2G12.

23 New Wood VACUUM BACK for Autoplates "considerably improves the printing of solids, halftones and the paper generally." Write for folder. This equipment is applicable to all types of autoplate machines. P-Double-E File No. 2G6.3.

24 DRY MATS—"For blacker blacks and better pictures . . . for cleaner news type, with less breaking down of weak slugs . . . use Flex dry mats." Samples sent without charge or obligation. P-Double-E File No. 2G18.1.

25 PACKING FELT—"Write for new low prices, quantity discounts, and working samples of Flex-O-Felt—a stereotype gummed packing felt put out by American Publishers Supply. No. 2G34.2.

26 DRY MATS—"With Wood Dry Mats halftones are crisp, clean and accurate . . . highlights are held white and bright . . . shadows kept as black as in the original . . . elusive middletones retained." Write for samples. P-Double-E File No. 2G18.1.

27 BACKING FELT—"Flecto," Eastern Newspaper Supply's gummed backing felt, "is successfully used on all dry mats." Free samples on request. P-Double-E File No. 2G34.2.

PRESSROOM

28 PRINTED AND UNPRINTED SAMPLES of Production Coated E.F. gladly supplied on request. It "has the unquestioned superior printing properties of coated paper, but maintains all the desirable features of an English finish surface."—Consolidated Water Power and Paper.

29 INK—For your modern high-speed presses investigate Champion Blacks. Champion's "Halftone," "Super" and "Book" are featured on page 44. Further facts sent on request. P-Double-E File No. 5W.

30 Five-color ROTARY PRESS—"Four color process work, plus an additional color, on a Cottrell Rotary at almost unbelievable speeds." A few features given on page 23. Further facts mailed. P-Double-E File No. 5LL7.

31 NEWSPAPER PRESS—"Scenes from the making of the modern newspaper" are shown on page 8. See these shots of "the original anti-friction bearing newspaper press" in action. Press details will be mailed. P-Double-E File No. 5LL25.

32 TYMPAN PAPER—"Try Reigel Tympans—Will send samples"—"Drumhead, ready-cut and scored treated topsheet. Certifine, low priced, strong, ideal for short runs. Treated Jute, reliable, good for long runs." P-Double-E File No. 5L3.

33 PRESS BLANKETS—"Uniform thickness—an outstanding feature of Vulcan press blankets—promotes uniform printing." Write for information about Vulcan Felt and Non-Felt newspaper blankets, underpackings, and draw sheets. P-Double-E File No. 5L1.

34 INKING ROLLERS—Vulcan Gelastic Rollers are remarkably soft and resilient . . . yet unaffected by extremes of heat and cold . . . promote clear, sharp, uniform printing always." P-Double-E File No. 5NN.

35 PRESS BLANKETS—Manufacturer quotes mechanical executives as saying with Fitz Livecork Blankets there isn't a chance for slurs in the printing or bolsters in the blankets" Samples sent on request. P-Double-E File No. 5L1.

36 INKS—"Uniform coverage . . . sharp, clean printing . . . no smudging . . . quick drying—these and many other profitable qualities are yours, with Morrill inks." Investigate further. Use return card. P-Double-E File No. 5W.

MISCELLANEOUS

37 BOOKLETS AND BROCHURES on the offset process and production. Use the return card. Webendorfer will put you on mailing list for informative releases and books. See page 30.

38 ADVERTISING PIECES "which demonstrate good printing and attractive layout will be sent to you on request. They will interest you. Write today. Use the return card. See page 25.

39 ZINC—"Many engravers report that they can save at least five minutes on every backote sheet and get better results. Avoid mess, drudgery and danger of old asphaltum process." P-Double-E File No. 2E12.3.

40 CUT MOUNTING CEMENT—See page 37. "How to get the most out of Zink Cut Cement." Prices given. Additional information sent on request. P-Double-E File Nos. 1A, 2G1.

41 TYPE METAL CONTROL—To help you maintain the quality of your Stereotype or typecasting Metals—Imperial has a plan. See page 39. Complete information will be sent on request. P-Double-E File Nos. 1R and 2G20.

42 CUT MOUNTING TAPE—"Plate-Tak"—Free samples sent on request by Eastern Newspaper Supply Co. P-Double-E File Nos. 1A, 2G1.

43 ZINC—When demand for Zinc is high depend on Edes. Their strategically located warehouses are prepared to take care of abnormal demands." Representatives listed on page 27. P-Double-E File No. 2E12.3.

44 SPECIALIZED MOTORS—Built by Kimble for every need in the printing field. Information and literature sent on request. Use the return card.

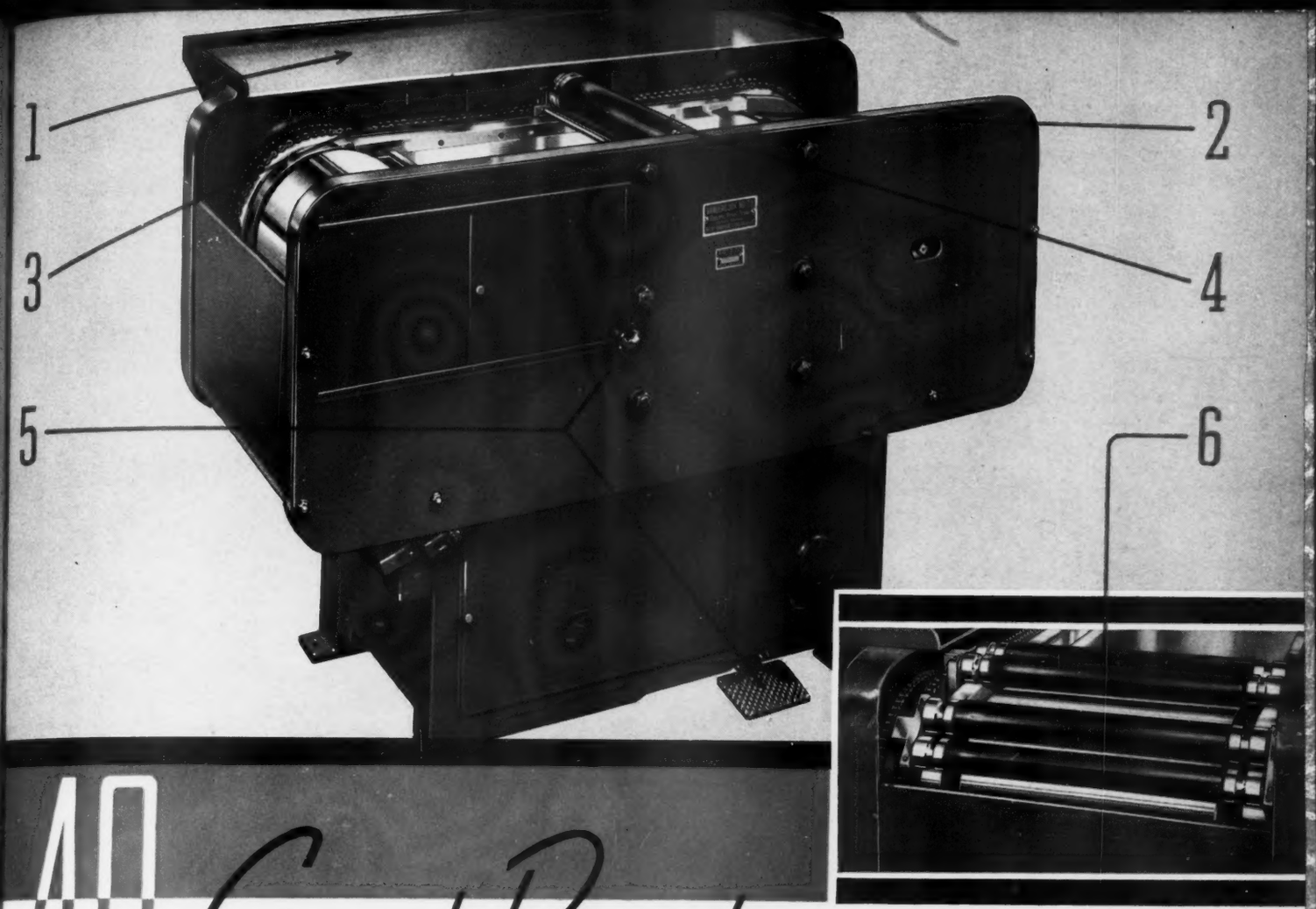
Check off the literature or information you want on reverse side. Postpaid. No obligation.

Postage Will Be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD
First Class Permit No. 2285, Sec. 510 P. L. & R. Cleveland, Ohio

Printing EQUIPMENT Engineer
1276 W. 3rd Street
Cleveland, Ohio



40 *Good Proofs* A MINUTE!

The United States Government Printing Office uses 13 No. 23 Vandercook Electric Proof Presses. Major publication and commercial printing plants requiring maximum speed in proving a great number of different forms, find the No. 23 Vandercook and its companion, the No. 22 Vandercook, essential to economical composing room operation.

Some of the reasons why the No. 23 Vandercook and No. 22 Vandercook Electric Proof Presses print good proofs so fast, follow:

1 Feed Board is constructed for minimum hand travel from the board to the form.

2 Bed has maximum accessibility. Forms are easy to change. Bed is of rigid construction.

3 Distance from bearer of press to feed board is only 3½ inches.

4 Special Vandercook Impression Roller stands up under hard use at high speed---and prints **good** proofs.

5 Convenient Controls insure maximum speed of all operations.

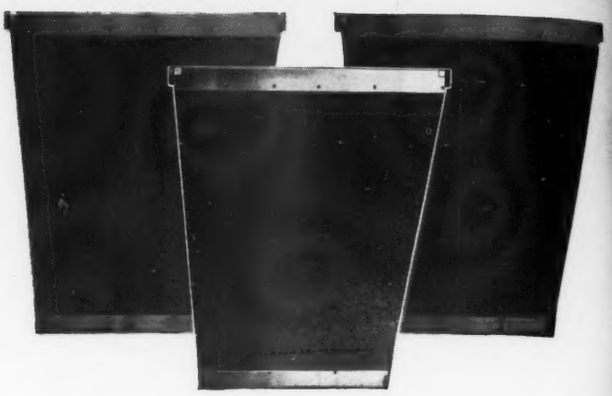
6 Ample Inking is assured for forms the full capacity of the press.

No. 23 and No. 22 Vandercook Electric Proof Presses afford an impression speed limited only by the ability of the operator. No. 23 will print a five column newspaper page or forms in galleys up to 14"x28". No. 22 Vandercook takes a galley up to 10"x26". It is recommended and widely used for proving type in galleys as it comes from the machines, or small ads, catalog or book pages.

Complete information on the No. 23 and No. 22 Vandercook Electric Proof Presses will be sent at your request---and without obligation to you.

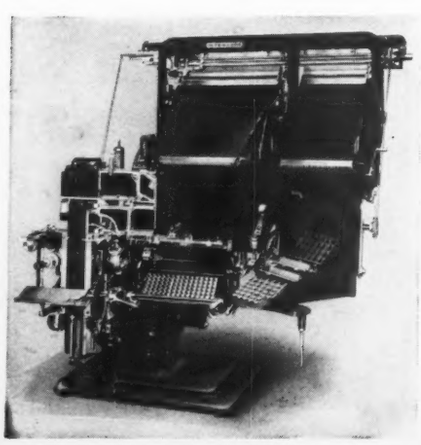
VANDERCOOK & SONS

Main Office and Factory — Eastern Branch



ONE font of matrices and ONE magazine in place of TWO fonts and TWO magazines

Here's a new development that cuts in half the equipment of matrices and magazines needed to set a given range of 18 and 24 point display; or, conversely, it increases by 100 per cent the number of faces, in those sizes, which can be set with a given amount of equipment. Furthermore, the saving in investment is only one of the major savings effected by Intertype two-letter display matrices. The savings in time, too, are substantial, resulting from fewer changes from one magazine to another and fewer replacements of magazines. Many combinations of two-letter display faces are already available, including combinations which are particularly useful for food store advertising. Two-letter display figures and other characters can be used in the regular lower position, for overhanging advertising figure work, with faces aligning at the top as usual. Other uses are available in which body sizes align at bottom with one of the duplexed display faces.

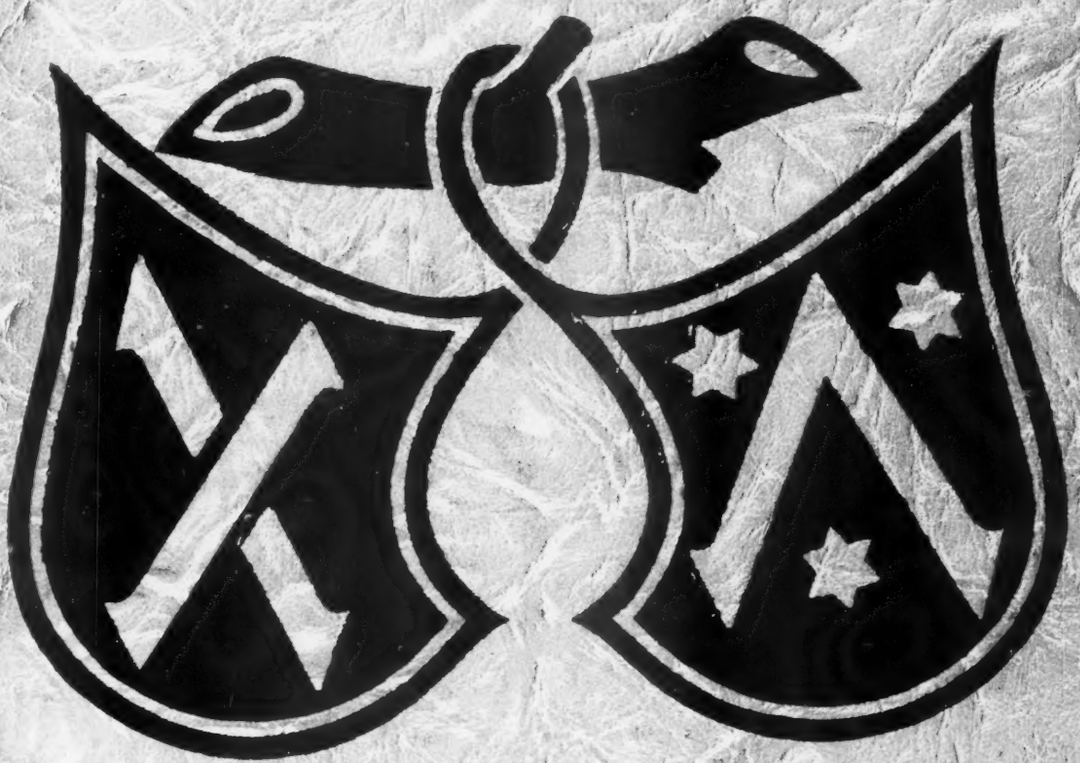


Write for advance specimens of Intertype two-letter display matrices. Please address INTERTYPE CORPORATION, *360 Furman Street, Brooklyn, New York, or its branches.*

INTERTYPE TWO-LETTER DISPLAY MATRICES

VOGUE EXTRA BOLD CONDENSED AND WEISS ROMAN

TERNATIONAL ASSOCIATION OF PRINTING HOUSE CRAFTSMEN



OSTON, MASSACHUSETTS, AUGUST, NINETEEN THIRTY-EIGHT